MARYLAND DEPARTMENT OF THE ENVIRONMENT

MANAGING FOR RESULTS

FISCAL YEAR 2004 WORKPLAN

JULY 2003

Robert L. Ehrlich, Jr.
Maryland Governor

Kendl P. Philbrick
MDE Acting Secretary

Maryland Department of the Environment
Managing Maryland for Results
Fiscal Year 2004 Workplan
Contents

5.2 Sewage Overflows
5.3 Financial Assistance for Capital Programs
5.4 Total Maximum Daily Loads

MDE operates many programs critical to the protection and improvement of water quality in our state. In addition to those described under Goal 5, other important water-quality programs address permitting, stormwater management, sediment control, mine reclamation, quarry impacts, identification of impaired waters, wetlands, ballast water, sewage sludge, dredging, water quality standards, and other issues.

GOAL 6: ENSURING THE AIR IS SAFE TO BREATHE

6.1 Reduce Ozone Transport from Upwind Areas
6.2 Attainment of Federal Ozone Standards

MDE operates a number of programs aimed at protecting air quality. In addition to those listed herein, significant MDE air-related programs address asbestos, air toxics, and mobile sources of air pollution.

GOAL 7: PROVIDING EXCELLENT CUSTOMER SERVICE TO ACHIEVE ENVIRONMENTAL PROTECTION

7.1 Electronic Government Services
7.2 Customer Service and Stakeholder Involvement
7.3 Park Heights Initiative

In addition to these activities described Under Goal 7, MDE also operates programs designed to help small businesses and to provide media outreach and public education.

MANAGING MARYLAND FOR RESULTS FISCAL YEAR 2004
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INTRODUCTION

This is the Maryland Department of the Environment's (MDE's) Fiscal Year 2004 Managing for Results (MFR) Final Workplan. This document reports on MDE's commitment to using results-based strategic planning and quality management approaches to achieve its public health, environmental, and management goals.

For FY 2004, MDE has streamlined reporting by reducing the number of key goals and refined reporting of its performance measures to focus more on results. Also, in contrast to previous years, please note that although this document highlights many priority areas, it is not comprehensive. Space limitations require that many important activities be mentioned only briefly, rather than covered in detail.

INITIATIVES

MDE has identified the following priority initiatives for 2003:

- Reforming brownfields and voluntary cleanup programs;
- Preventing lead poisoning;
- Restoring the Chesapeake Bay through increased federal funding for wastewater management, and through other means;
- Reducing power plant emissions of ozone precursors from upwind areas;
- Improving services and efficiency, through the Department's new data management system (see below) and in other ways;
- Maximizing federal assistance for state environmental programs;
- Developing and beginning implementation of the Environmental Benefits Districts approach; and
- Facilitating better public participation and more stakeholder input into MDE's decisions

GOALS

MDE uses the following seven broad goals to organize and measure its progress in achieving its mission, vision, and goals:

Goal 1: Promoting Land Redevelopment and Community Revitalization
Goal 2: Ensuring Safe and Adequate Drinking Water
Goal 3: Reducing Maryland Citizens' Exposure to Hazards
Goal 4: Ensuring the Safety of Fish and Shellfish Harvested in Maryland.

Goal 5: Improving and Protecting Maryland's Water Quality
Goal 6: Ensuring the Air is Safe to Breathe
Goal 7: Providing Excellent Customer Services to Achieve Environmental Protection.

REPORT ORGANIZATION

Within each of the goals, MDE's FY 2004 MFR workplan is organized into several objectives. The following information is presented for each objective:

1. description of the objective;
2. list of the strategies to achieve the objective;
3. chart of performance data; and
4. graphic indicator(s) of performance.

The FY 2004 format is more concise and easier to read. Also, MDE has reduced the number of performance measures tracked centrally, focusing more on environmental indicators and outcome measures. These changes are consistent with guidance received from analysts from the Department of Budget and Management and the Department of Legislative Services.

One note about performance measure data: Unless otherwise noted, the data that appears in the following tables is annual, not cumulative.

MISSION

MDE's mission is to protect and restore the quality of Maryland's air, water, and land resources, while fostering economic development, safe communities, and quality environmental education for the benefit of the environment, public health, and future generations.

VISION

MDE's vision is to ensure a clean environment and excellent quality of life for all Marylanders.

VALUES

MDE employees are:

- Credible and have the public's confidence;
- Supportive of teamwork, and empowered by management;
- Innovative and resourceful;
- Customer-service-oriented;
- Professional and proud of their work;
- Responsive to their stakeholders; and
- Supportive of environmental stewardship.

MDE CUSTOMERS AND STAKEHOLDERS

MDE's customers include Maryland citizens who expect protection and restoration of the environment; businesses, governments, and individuals who are applying for permits and receiving technical assistance; and technical personnel including well drillers, sanitarians, waste water operators, and asbestos contractors who require certification. Other key stakeholders include environmental and public health advocacy groups, citizen groups, educators, scientists, and natural resource users.

Services and Results: MDE's key results requirements for external customers and stakeholders fall generally into the following six categories:

- Timely and cost effective permitting;
- Quality and enforceable permitting;
- Timely and appropriate enforcement actions;
- Timely and appropriate complaint responses;
- Timely and effective clean ups; and
- Timely and quality environmental data.

IMPLEMENTING THE ENVIRONMENTAL ENTERPRISE MANAGEMENT SYSTEM

Achieving environmental and public health improvements requires long-term resource investments in program implementation. The Department continues to focus its limited resources on its critical environmental and public health protection priorities. In this context, implementation of the Environmental Enterprise Management System (EEMS), MDE's new data management system, will become even more critical as a means to improving multi-media data management and integration. EEMS will support all MDE programs and environmental goals. EEMS will be web-enabled to support e-business, which for MDE will include processing permits and registrations electronically. Electronic permitting will not only improve customer services; it will also reduce data entry and processing time, provide better access to data for public use, and increase data quality.

CONCLUSION

MDE's FY 2004 MFR Workplan is the result of extensive collaboration, input, and review by all organizational levels within MDE. It can also be found on the Department's web site, at http://www.mde.state.md.us/.

Through successful implementation of its policies and programs, MDE remains committed to achieving its mission of protecting Maryland's public health and environment.

Voluntary Cleanup Program

Introduction: Maryland's rich industrial history has resulted in a significant number of properties where investigation and/or cleanup of contamination is necessary to ensure that public health is protected. This program eliminates threats to public health from exposure to soils, groundwater, and surface water contaminated by hazardous waste and other substances, while encouraging the revitalization of industrial and commercial properties. Redevelopment requires environmental cleanup, may provide economic development benefits including new jobs and increased tax revenues, and promotes wise growth by using existing infrastructure and avoiding development in undeveloped "greenfields".

Objective 1.1: In FY 04, continue to increase the annual number of acres of brownfields/voluntary cleanup program (VCP) sites remediated/completed over the previous year by 100, as resources and economic conditions allow.

Strategy 1.1.1: Continue to market and encourage participation in the cleanup and redevelopment of brownfields through seminars, workshops, and other outreach activities; continue to reevaluate and discuss additional improvements to the VCP utilizing input from stakeholders, and consider recommendations from the Environmental Restoration and Development Task Force due December 31, 2003.

Strategy 1.1.2: Continue to oversee cleanups of eligible properties and provide technical assistance to private industry for assessments and cleanups of hazardous waste sites.

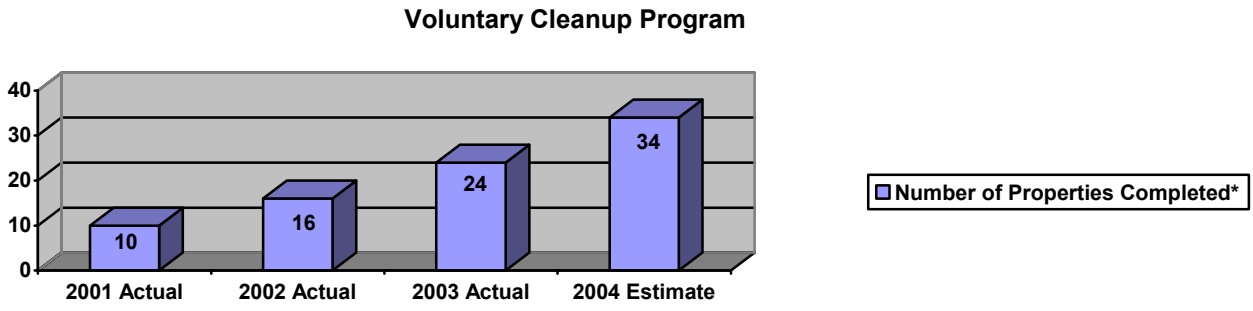
Strategy 1.1.3: MDE will continue to implement a Brownfields Site Assessments initiative, which is designed to help eligible property owners or prospective purchasers determine the extent of contamination on the property, at no cost to them. Owners and prospective purchasers of property that is planned for participation in the VCP may apply for Brownfields Site Assessments, which will reduce the costs associated with the application process.

Performance Measures:

Performance Measures (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Actual	FY 2004 Estimate
Number of acres of property in the VCP completed and a No Further Requirements Determination or a Certificate of Completion issued	120	299	247	350
Number of properties in the VCP completed and a No Further Requirements Determination or a Certificate of Completion issued	10	16	24	34
Number of additional jobs created each year as a result of Brownfields/VCP site development*	429	1,700	1,810	2,000
Amount of estimated capital investment in redevelopment of Brownfields/VCP sites that have been cleaned up*	$35 million	$200 million	$428 million	$450 million
Estimated increase in tax base from job creation and/or capital investment resulting from cleanup of Brownfields/VCP sites	N/A	$25 million	$36.5 million	$50 million
Percentage of VCP properties where streamlined deadlines were met in reviewing applications and Response Action Plans	100% (26/26)	100% (34/34)	97% (30/31)	100% (30/30)

*This information was obtained from applications or from responses to a survey of all VCP applicants who had received either a No Further Requirements Determination or a Certificate of Completion during FY2003. Some applicants did not complete the survey.

Performance Indicator:



*** With a No Further Requirements Determination or a Certificate of Completion issued**

Environmental Justice, Environmental Benefits Districts, Community Revitalization and Outreach

Introduction:

Several studies document that marginalized low-income and minority communities are at much greater risk for environmental hazards and injustices. "Environmental justice" (EJ) refers to the pursuit of equal protection from environmental and public health hazards for all people regardless of race, income, culture, and social class. To address this, one of the main goals of the EPA's Performance Partnership Agreement with MDE is to increase the opportunities for public participation that are integrated in MDE's and EPA's programs and policy deliberations. Furthermore, as general rule, EPA encourages MDE to consider the issues of environmental justice and public involvement in its environmental deliberations. Additionally, MDE has begun an initiative to improve cooperation with local governments and communities.

When combined with the ongoing priority placed on stimulating business opportunities and community revitalization, these important goals can pull the agency in several directions. In an effort to better understand the confluence of concerns related to communities in Maryland, the General Assembly passed House Bill 1350 in 1997, establishing the Maryland Advisory Council on Environmental Justice to provide recommendations to the Governor and legislators on environmental justice matters. In fulfilling its charge, the Council established several forums for public discussion on environmental justice. These included undertaking more than 75 open meetings over two years and five major statewide workshops.

The statewide workshops raised several concerns about potential EJ issues including lead poisoning, increased respiratory concerns, communication, infrastructure needs, locally-unwanted land uses, living and working conditions, limited regulatory protection, public involvement and outreach, etc. It was clear from the statewide meetings that additional study was needed, and one of the Council's major recommendations was to establish a Commission to more fully consider EJ issues. In March 2001, Maryland's Commission on Environmental Justice and Sustainable Communities (the EJ Commission) was established by executive order. The EPA-managed Chesapeake Bay Program has also now established an EJ task force.

Objective 1.2: In FY 04, maintain at 30 the number of people annually who are provided support, outreach, and other services in connection with MDE's efforts related to community economic revitalization and environmental justice. Also, identify at least one Environmental Benefits District (EBD) and secure resources for, and participation in, activities within that EBD.

> **Strategy 1.2.1:** Continue to institute an environmental justice and sustainable communities ethic within and external to MDE by providing services and partnering and/or collaborating with stakeholders to address concerns and develop projects that promote, institute, and sustain such an ethic. This ethic will assist in building relationships and collaborative partnerships, in extending support to stakeholders, and in informing policy decisions.
>
> **Strategy 1.2.2:** Identify jurisdictions that fit the criteria for EBDs and create at least one EBD. In it, provide targeted business outreach; support innovative projects that help small businesses; develop cooperative agreements and proactive rapport with community members and others involved; facilitate resolution of community disputes; and provide other support as necessary.
>
> **Strategy 1.2.3:** Continue to work closely with the EJ Commission and the Chesapeake Bay Program's EJ Task Force to address EJ issues and stakeholders' concerns. MDE will work with the Commission and Task Force to (1) build stakeholders' capacity to identify local environmental justice

problems; and (2) involve the community and other stakeholders in design and implementation of activities to address these concerns and revitalize their communities.

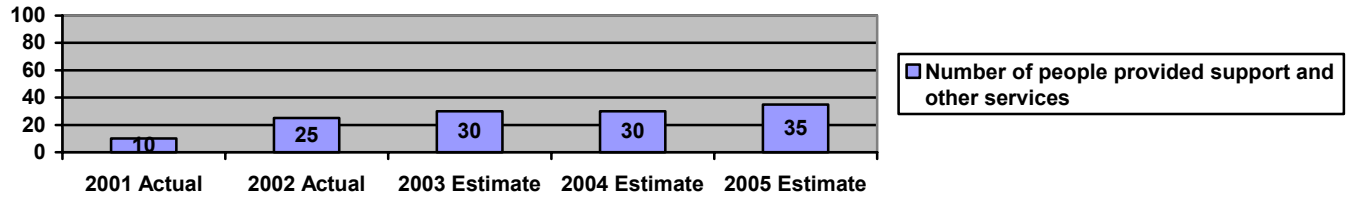
Strategy 1.2.4: Develop comprehensive analyses of communities using geographic information systems and other data gathering tools. This will allow MDE to better understand and help communities that may be environmentally stressed.

Performance Measures:

Performance Measures (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate
Number of people attending E.J. related meetings and activities	200	220	248	300
Number of MOUs, partnerships, and/or special projects with academic, federal, state, local, non-profits, businesses, communities and other stakeholders, undertaken to encourage community revitalization communities and address environmental concerns	2	2	2	2
Number of EBDs created	new measure	new measure	new measure	1
Number of parties concerned with EJ issues with whom MDE interacts annually to offer help and address concerns	10	25	30	30
Number of community characterizations undertaken: *This includes - number of data gathering analyses undertaken to improve environmental decision making for businesses, communities, and government.*	1	1	1	1

Performance Indicators

Environmental Justice, Community Revitalization and Outreach:



Public Drinking Water Compliance

Introduction: The Water Supply Program's activities help to ensure that community water systems provide safe drinking water to their customers. The greatest challenges for all public water systems are managing and protecting water systems with limited resources, and complying with the ever-increasing number of State and federal requirements and standards.

Water system compliance is assured through a variety of activities, including:

- Training and guidance materials for water system owners and operators;
- Continuing to perform sanitary surveys to identify shortfalls and compliance issues at drinking water sources and community systems; and
- Support of operator training programs.

Objective 2.1: Ensure compliance of community and non-transient non-community public water systems with all federal and State drinking water regulations. In FY 04, at least 97% of the population will be served by public water systems (community and non-transient non-community) that are in compliance with the State regulations adopted as of 2002.

Strategy 2.1.1: Adopt federal regulations finalized by EPA in 2002. Implement the recent regulation changes for: the Interim Enhanced Surface Water Treatment Rule, Disinfection Byproduct Rule, revised Public Notification Rule, Arsenic Rule, Radionuclide Rule, and the Filter Backwash Recycling Rule.

Strategy 2.1.2: Continue providing on-site technical assistance such as the Comprehensive Performance Evaluations (CPEs), which identify areas that affect the performance of drinking water filtration plants. A team of three or four staff experienced in water filtration design and operation conducts CPEs. The final report can be used by water systems to prioritize improvements that will improve the drinking water quality, and the reliability of the water treatment plant.

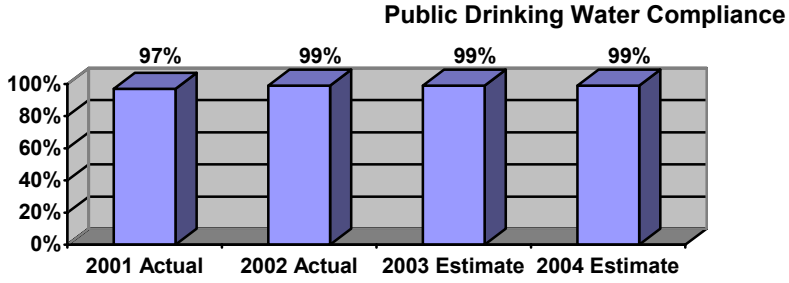
Strategy 2.1.3: Continue providing financial assistance to communities under the Drinking Water State Revolving Fund (DWSRF) and grants programs to assist communities in upgrading water supply systems, specifically by financing $13.5M in Water Supply/Safe Drinking Water Projects with state capital dollars in FY2004**.** This amount is based on $11 million in capital loans and $2.5 in capital grants funds. Capital funding will be targeted to projects with the highest public health needs and where funding is provided. For eligible "growth-related" projects, funding will be targeted toward Priority Funding Areas consistent with the law. Funds appropriated by the Legislature for FY2004 will be utilized in a timely manner by encumbering not less than 90% of funds by the end of FY2004. Capital Programs for Safe Drinking Water projects will be monitored and tracked for schedule slippage. Major schedule slippage will be flagged for management review and action. Opportunities to accelerate projects and/or reprogram funding to other projects ready to proceed will be routinely evaluated.

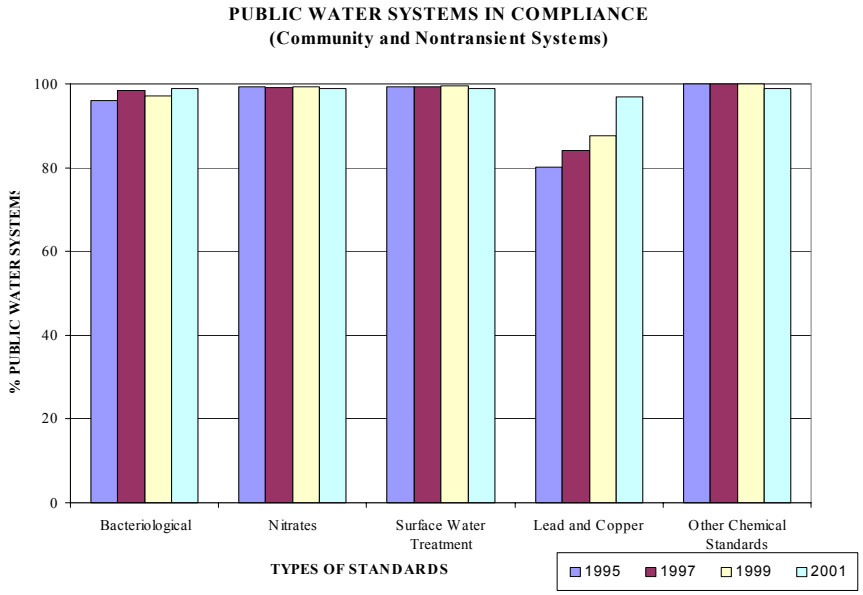
Strategy 2.1.4: Promote compliance assistance and when necessary take enforcement actions against water systems that are not in compliance with State and federal drinking water regulations.

Performance Measures:

Performance Measures (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Actual	FY 2004 Estimate
Percentage of Marylanders served by public water systems in significant compliance with all rules adopted as of 2002	97%	99%	99%	97%
Percentage of community water systems in compliance with health-based standards	92%	94%	98%	94%
Percentage of community and non-transient water systems in compliance with State regulations	87%	80%	80%	87%
Number of Public Water System Enforcement Actions Initiated	123	251	322	Unable to estimate
Number of compliance assistance actions provided	1,117	1,076	1,099	Unable to estimate
Capital projects financed from Drinking Water SRF	$13.8M	$12.5M	$10.6	$11M
Capital grant funds encumbered for capital improvement projects by Water Supply Financial Assistance Program	$2.5M	$1.99M	$1.6M	$2.5M

Performance Indicators:





The quality of water provided by public drinking water systems - which serve approximately 84% of Maryland residents - is very good.

Compliance rates are at >97% for all standards (see graph). New regulations were adopted each year from 2000 through 2003.

Source Water Protection

Introduction:

Three related areas of the Department's Water Supply Program's work are addressed here: (1) source water assessments; (2) watershed protection programs; and (3) wellhead protection programs.

Source Water Assessments

The Program has developed an EPA-approved Source Water Assessment Plan. The plan describes how Maryland will delineate source water assessment areas, identify potential contaminant sources and conduct a susceptibility analysis for all sources used by public water systems in Maryland.

Wellhead Protection Programs

There are distinct geographic differences among Maryland's water sources. Areas away from Maryland's major population centers are more likely to rely on groundwater, particularly in Southern Maryland and on the Eastern Shore where groundwater aquifers are very productive (see map below). In these regions of Maryland, layers of clay called confining layers generally protect groundwater supplies. Approximately 500,000 residents relying on groundwater from public systems receive their water from these deep, naturally-protected, confined aquifers.

In the central and western areas of Maryland and the Columbia aquifer on the Eastern Shore, groundwater aquifers are not protected by confining layers, and are more susceptible to contamination from activities at the land surface. Groundwater sources other than wells in deep confined aquifers are considered vulnerable to contamination. Currently about 310,000 Marylanders are supplied by vulnerable groundwater sources from community water systems. By 2006 an estimated 320,000 Marylanders will be served by vulnerable groundwater systems.

Local governments use voluntary wellhead protection programs to reduce the risk of contamination and protect the recharge area of their groundwater supply. About 36 communities are implementing wellhead protection programs, which include education and public outreach, reviewing new construction, adopting local ordinances prohibiting certain land uses that would jeopardize the water supply, and investigating potential contamination sources.

Watershed Protection Programs

All surface water sources are considered potentially vulnerable to contamination. Currently about 3.61 million Marylanders are served by surface water sources. By 2006 this number is expected to increase to around 3.65 million Marylanders.

Public water systems use voluntary watershed protection programs to reduce the risk of contamination and to protect the recharge area of their surface water supply. Formal

watershed protection programs are in place for three large public drinking water systems that receive water from vulnerable sources: Baltimore City, Cumberland, and the Washington Suburban Sanitary Commission's Patuxent Supply. Significant local participation has been key to program successes. Coordination with other agencies and states has begun for many water system watersheds. MDE Water Supply staff provide technical assistance to inter-agency and inter-jurisdictional reservoir protection and management programs. MDE is assisting in coordination of protection efforts across jurisdictional boundaries.

Objective 2.2: In FY 04, assist water systems and local governments in establishing source water protection programs benefiting more than 71% of Maryland residents that obtain drinking water from vulnerable community water systems.

Strategy 2.2.1: Complete source water assessments for all community water systems by end of 2004.

Strategy 2.2.2: Provide guidance to water suppliers and local governments to develop watershed management and protection programs to protect drinking water sources. Seek sources of funding to assist these efforts.

Strategy 2.2.3: Utilize the DWSRF set-aside program to provide wellhead protection grants to develop practical and efficient locally-based active wellhead protection programs.

Strategy 2.2.4: Utilize the DWSRF loan program to make land or easement purchases as a way to control/prevent water supply pollution. The deeds for the purchased land include conditions that protect the surrounding water supplies. Examples of land conditions include: restrictions on the storing of hazardous materials on the land or easement, development of wetlands on the land or easement, and restriction on further construction on the land or easement.

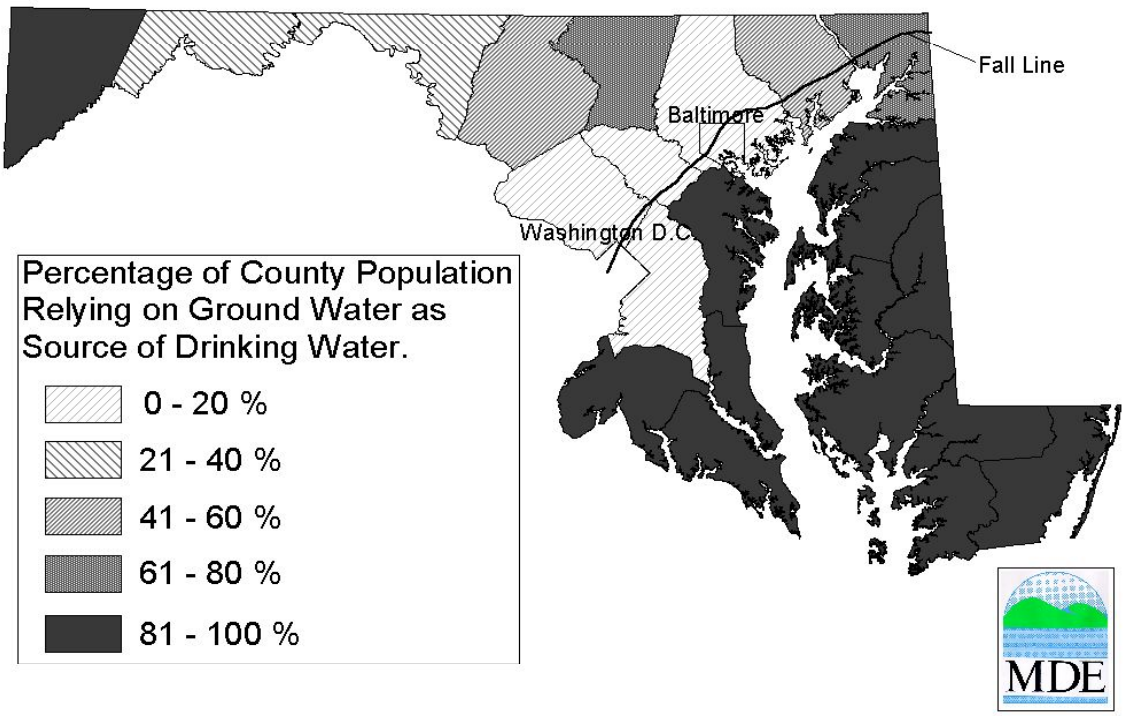
Performance Measures:

Performance Measures (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate
Percent of Maryland residents that obtain drinking water from vulnerable community water systems benefiting from source protection programs	67%	69%	70%	71%
Marylanders served by community water systems relying on surface water sources with watershed protection programs[1]	2.48 million	2.55 million	2.60 million	2.63 million
Marylanders served by community water systems relying on vulnerable ground water source with active wellhead protection efforts[2]	128,000	130,308	136,000	160,000
Percent of source water assessments completed for community water systems as of the end of the fiscal year (cumulative)	15.8%	28%	57%	100%

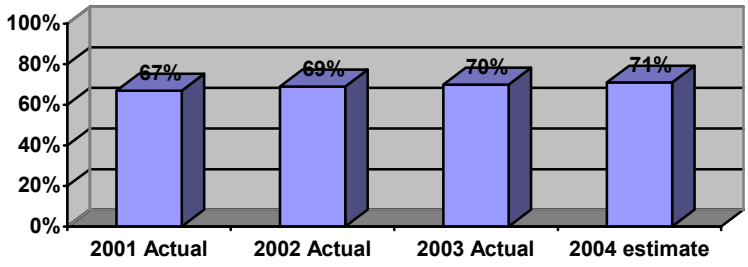
[1] Currently about 3.61 million Marylanders are served by surface water sources. By 2006 this number is expected to increase to around 3.65 million Marylanders.

[2] Currently about 310,000 Marylanders are supplied by vulnerable groundwater sources from community water systems. By 2006 an estimated 320,000 Marylanders will be served by vulnerable groundwater systems.

Performance Indicators:



Source Water Protection



% of Marylanders that obtain drinking water from vulnerable community water systems benefiting from source water protection programs

Water Appropriation

Introduction:

Maryland has a program for evaluating water use and the adequacy of water resources to meet the demand of specific users. Any person who wishes to appropriate water for agricultural, municipal, commercial, industrial, or other non-domestic uses must obtain a Water Appropriation Permit from MDE. There are currently more that 13,000 active Water Appropriation and Use Permits. Review of the permit application involves evaluating the potential needs of the user and the probable impact of the withdrawal on neighboring users. The goal of the permit program is to maximize beneficial uses of the waters of the State, while minimizing conflicts between water users. A secondary aim is to ensure that water resources are not overused and that the environmental impacts of each water use are acceptable.

By Executive Order in March 2003, Governor Ehrlich established an Advisory Committee to provide guidance to the State on managing Maryland's water resources. The Committee is charged with advising and assisting the State in implementing programs and policies relating to the management, development, conservation, and protection of the State's water resources.

Objective 2.3: In FY 04, ensure that ground water permits do not cause regional ground water levels in confined aquifers to decline below the 80% water management level by, for all groundwater permits, either evaluating the application with respect to the 80% requirement or conducting a water balance analysis. Also, ensure that future surface withdrawals do not exceed available supplies by requiring that 100% of surface water permits allow for adequate minimum flows for downstream users and in-stream living resources by incorporating flow-by requirements and/or other appropriate requirements.

Strategy 2.3.1: Continue to regulate surface and ground water withdrawals through permits, and use the permit system to promote the greatest feasible use of the water resources while avoiding water use conflicts and shortages. Through permits, MDE will assure that ground water withdrawals do not exceed the sustained yield of Maryland's aquifers, and that ground water withdrawals from unconfined aquifers do not exceed drought-year, ground water recharge rates within each watershed. Compliance of permittees with flow-by requirements will be addressed. Surface water withdrawals will be managed to assure adequate downstream flow for other users and environmental needs. Compliance with permitted withdrawal limits will also be enforced.

Strategy 2.3.2: Improve information management and data collection. By comparing existing water-related databases, MDE will identify community public water systems with inadequate or marginal supply sources, and will assist them in securing adequate supplies. MDE will also bring permittees into compliance with water use reporting requirements in order to ensure the integrity of the permit system, of MDE's water-use information, and MDE's ability to measure the adequacy of available water supplies. MDE will continue to work cooperatively with agencies such as the U.S. Geological Survey and Maryland Geological Survey to assure that their study efforts

and monitoring programs are aligned with the information needs of MDE that will allow the measurement and achievement of the State's resource management goals.

Strategy 2.3.3: For the Potomac River, proposed changes in the environmental flow-by resulting from the Department of Natural Resources' current study will be reviewed for implications to water supply needs. The recent studies on water supply and demand from the Potomac will also be considered in setting policy for future appropriations.

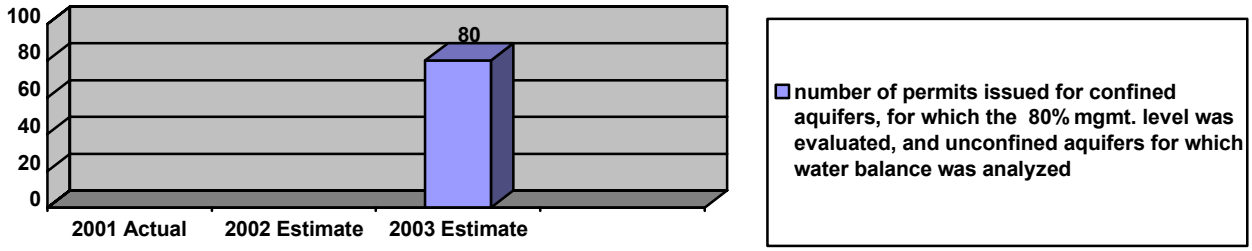
Strategy 2.3.4: Continue to work with interstate water commissions on water-related issues that have impacts that cross state boundaries and provide advice and guidance to local planning agencies, to ensure that their growth plans adequately consider water availability. Also, local Water Management Strategy Areas will be developed, where appropriate, to address specific ground water supply issues. For each permit issued that allows withdrawals from a confined aquifer, MDE will assess the regional ground water level relative to the 80% water management levels defined in state regulations.

Performance Measures:

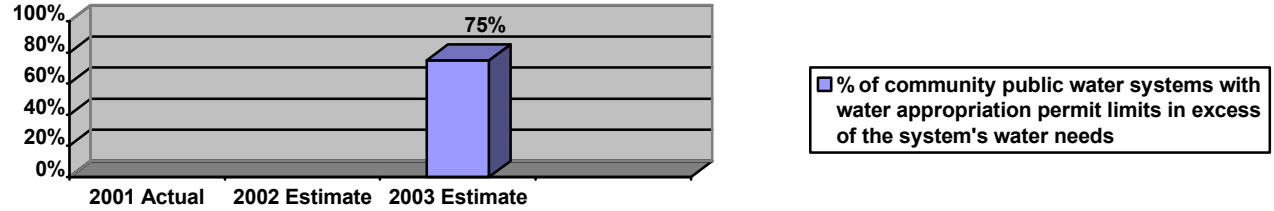
Performance Measures (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Actual	FY 2004 Estimate
Number of groundwater appropriation permits issued	1,160	1,626	1,200	1,200
Percentage of groundwater appropriation permits issued for which the 80% water management level was evaluated, or a water balance analysis performed	N/A	N/A	100%	100%
Number of surface water appropriation permits issued	100	111	111	110
Number of surface water permits issued with a flow-by requirement	N/A	N/A	70	70
Percentage of permittees in compliance with permit limits	N/A	N/A	80%	85%
Number of renewal notices sent for expiring permits	N/A	N/A	1,200	1,300

Performance Indicators:

Permits Evaluated for Sustained Yield Criteria



Water Appropriation Permits for Community Public Water Systems



Oil Pollution Remediation

Introduction: Releases of petroleum that require a response and cleanup can originate from above or underground storage tank systems, all forms of transportation, and any commercial or pleasure uses of petroleum products. These releases can render drinking water unfit for consumption, endanger wildlife, and create flammable and explosive conditions. MDE staff oversees the investigation and cleanup of petroleum releases to ensure the waters of the State and the public are adequately safeguarded. The time it takes from discovery of a petroleum release to MDE's determination that a cleanup has been successfully completed, varies significantly from case to case and depends upon a variety of factors. Some sites require active removal of petroleum product from the ground for over ten years while minor surface spills may be resolved within hours. The discovery of the gasoline additive methyl tertiary butyl ether (MTBE) in groundwater associated with releases of gasoline, as well as other petroleum products, including heating oil, has complicated the investigation and cleanup process. MTBE is very soluble in water and has the potential to migrate in groundwater much farther from the site of the release than other constituents of gasoline, often beyond adjacent properties. Since EPA continues to provide the majority of the funding supporting the State's Leaking Underground Storage Tank Program and the State must meet certain commitments under EPA grant agreements, the State must provide its own funding support for cleanups of all other sources of petroleum releases, including aboveground storage tanks and all heating oil tanks, the most numerous of which arise from small businesses and residences.

Objective 2.4: Complete cleanup of 85% of underground storage tank (UST) releases by the end of State FY2005.

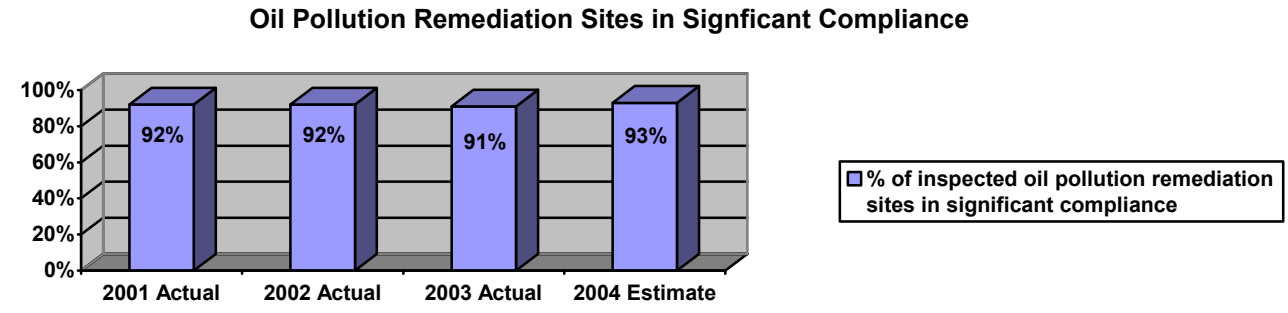
Strategy 2.4.1: Continue inspections, compliance assistance actions, and appropriate enforcement actions at oil pollution remediation sites to ensure protection of groundwater and reduce impacts to drinking water wells.

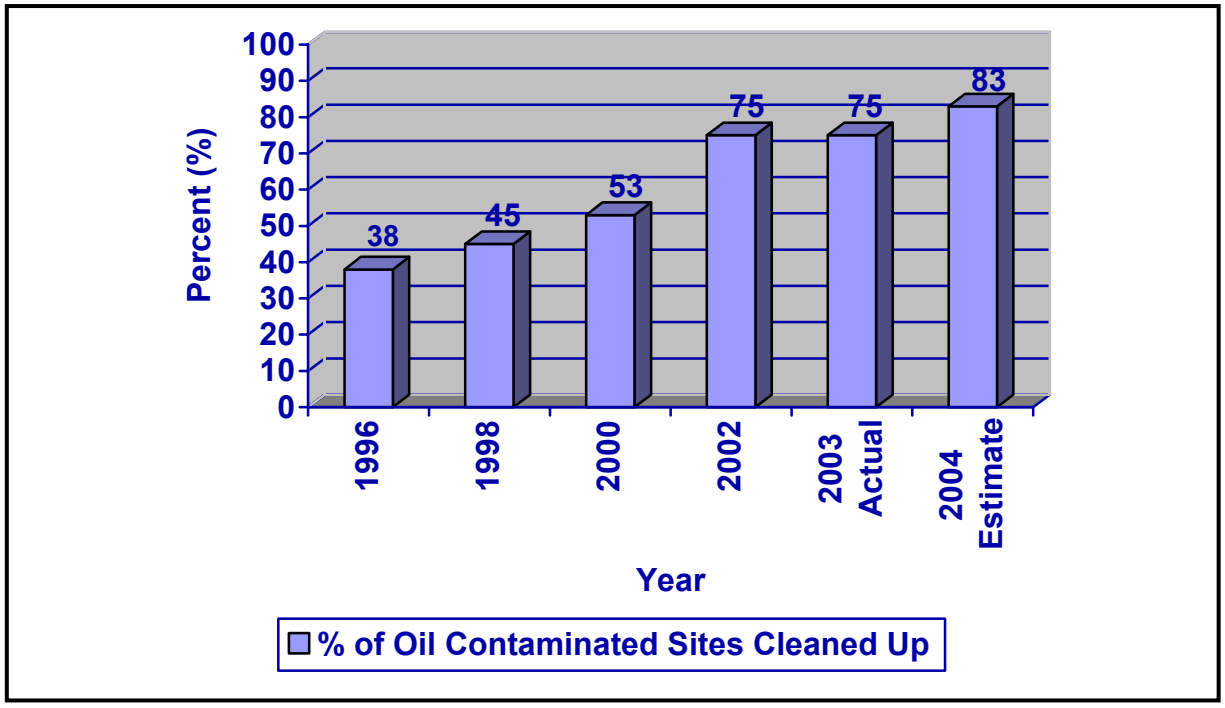
Strategy 2.4.2: Continue implementation of the clean-up reimbursement program for costs associated with cleanups of releases from commercial and residential heating fuel tanks.

Performance Measures:

Performance Measures (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Actual	FY 2004 Estimate
Percentage of inspected oil pollution remediation sites in significant compliance	92%	92%	91%	93%
Percentage of oil-contaminated sites cleaned up	69%	75%	75%	83%
Number of oil pollution remediation site compliance assistance actions rendered	5,687	5,555	4,385	unable to estimate

Performance Indicators:





Municipal Landfill Compliance with Groundwater Standards

Introduction: MDE's solid waste management activities include issuing permits for the State's 80 permitted solid waste acceptance facilities, performing over 800 inspections annually to ensure that solid wastes are managed properly, and ensuring that closed municipal landfills are properly capped and monitored for a 30-year post-closure period. MDE's solid waste management strategies have been consistently applied over many years, and have demonstrated major improvements that are obvious when contrasting the waste disposal in Maryland in 1980, and even 1990, with the situation today. For example, there are fewer active municipal landfills, but more active rubble landfills and other types of facilities, than there were 10 or 20 years ago. Also, modern landfills are constructed with liners, leachate collection systems, and other systems designed to contain pollutants and protect groundwater. However, the older, inactive facilities still exist, and require monitoring and inspection to ensure the State's drinking water supplies are protected. As communities expand to include areas that were previously largely undeveloped, homes and businesses are being sited much nearer to these older landfills. Program responsibility for monitoring and ensuring proper groundwater remediation at these facilities will continue for many years.

Objective 2.5: In FY 04, maintain 80% significant compliance with groundwater standards for all active municipal solid waste landfills.

Strategy 2.5.1: Require that permitted solid waste facilities are designed and operated in compliance with all applicable water pollution control requirements and have at least the minimum requirements for pollution prevention and control. Ensure that closed municipal landfills, active from 1991 to closure and regulated under the Code of Federal Regulations, are properly capped and monitored for a 30-year post closure period.

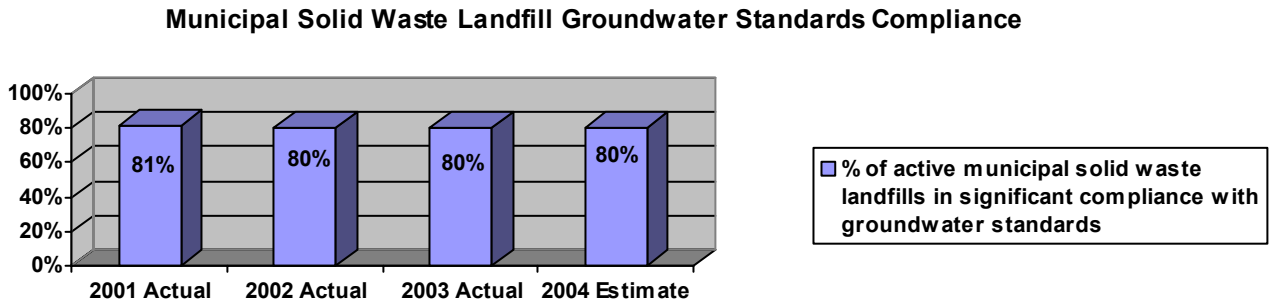
Strategy 2.5.2: Act to prevent and control the release of pollutants through the review of proposed disposal site locations, preventive engineering, pollution control technologies, review of construction, and remedial activities.

Performance Measures:

Performance Measures (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Actual	FY 2004 Estimate
Percentage of active municipal solid waste landfills in significant compliance with groundwater standards	81%	80%	80%	80%
Percentage of inspected refuse disposal facilities (includes other solid waste facilities) in significant compliance*	91%	88%	83%	90%
Percentage of all Landfill (active and closed) Water Quality Reports reviewed	59%	48%	35%	50%

* Due to staff shortages, prioritized inspections of poor performers, and increased enforcement actions, rates of significant compliance have been decreasing in recent years. The Program anticipates that with increased attention, the poor performers will come into compliance.

Performance Indicators:



Lead Poisoning Prevention

Introduction: Childhood lead poisoning is a critical environmental challenge in Maryland. There are major initiatives at both the State and federal levels to reduce the incidence of lead poisoning in children. Since 1984, Maryland has developed a strong, diverse infrastructure to respond to this complex issue. MDE's components focus on activities involving accreditation and oversight of lead abatement services contractors, maintaining a registry of rental properties, maintaining a registry of lead-poisoned children, and inspection and enforcement.

Objective 3.1: Reduce the percentage of occurrences of lead poisoning statewide (with an emphasis in Baltimore City) by 10% per year for each year through the end of 2006.

Strategy 3.1.1: Continue to increase awareness and prevention efforts through enhancing MDE outreach activities and meetings, negotiating Memoranda of Understanding (MOUs) with all 24 local jurisdictions to enhance lead education/outreach work, and adding registration and inspection information to the MDE website.

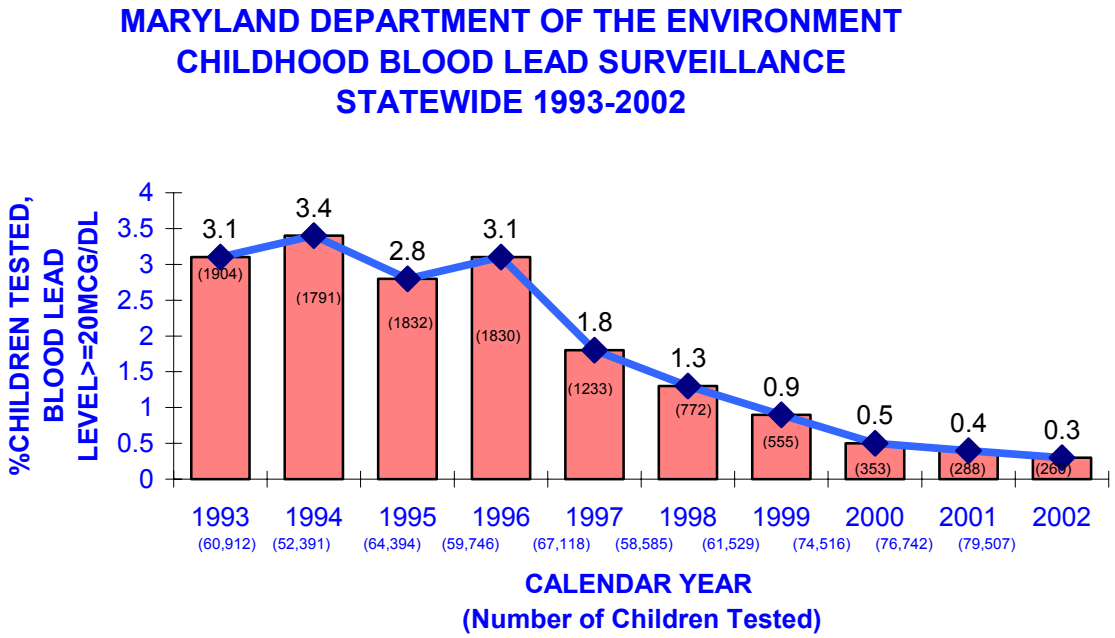
Strategy 3.1.2: Continue to maintain the level of inspection activities related to lead paint violations through the use of the Lead Rental Property Registry, inspections conducted by MDE and certified abatement inspectors, oversight of accredited lead paint abatement contractors, supervisors, and inspectors, and accreditation issuance within the 30-day standard time. Partner with local governments and utilize enforcement options as necessary to ensure compliance.

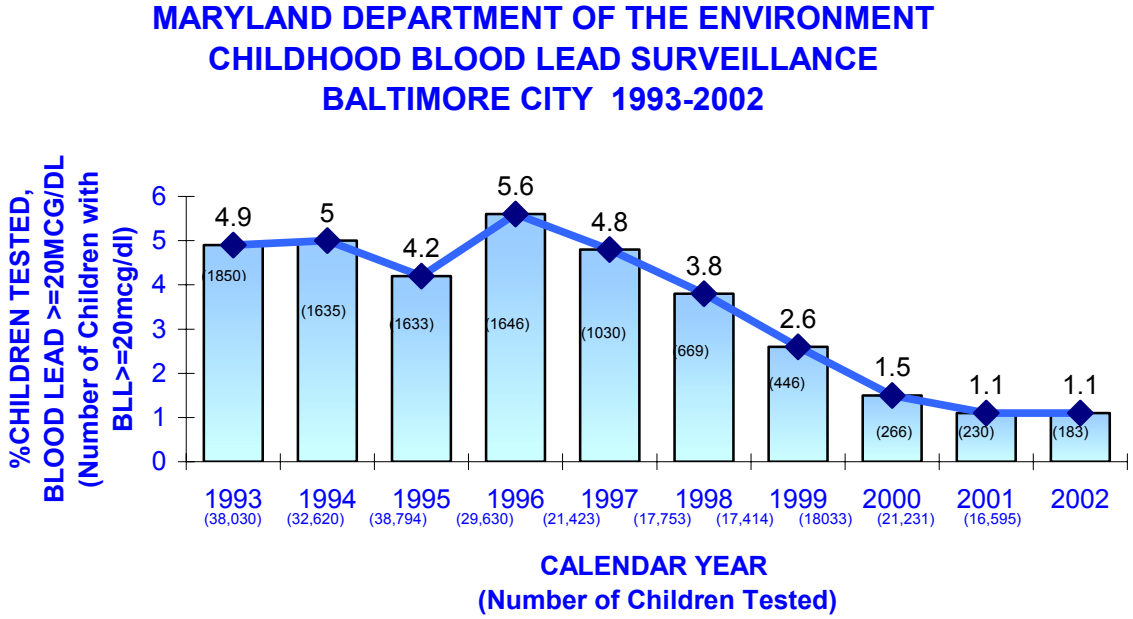
Performance Measures:

Performance Measures (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Actual	FY 2004 Estimate
Reported exceedences of the lead poisoning standard*	353	288	260	230
Percentage of children tested for blood lead with the result of 20 micrograms per deciliter or more, the level of "poisoned"*	0.5%	0.4%	0.3%	0.27%
Number of lead-paint-in-housing compliance assistance actions rendered	133	528**	65***	100

* Blood lead information is collected on a calendar-year basis, so FY2003 entry reflects CY2002 data.
** This number reflects particular dedication of resources in FY2002 that were not available in other years.
*** Numbers of compliance assistance actions rendered decreased in FY2003 due to severe winter weather, the loss of two inspectors, and the activation of one inspector for military duty.

Data Indicators:





Nuclear and Environmental Emergency Preparedness

Introduction: MDE, in cooperation with local hazardous materials units, has the capacity to respond to emergencies to minimize risks to human health and the environment resulting from accidents and/or deliberate actions causing the release of hazardous substances to the air, water, or land from fixed facilities, rail, waterway, and truck transportation routes.

Objective 3.2: In FY 04, respond to 100% of nuclear and environmental emergencies within three hours anywhere in Maryland.

Strategy 3.2.1: Participate in emergency exercises with local governments, allied state agencies, federal agencies and industry (including chemical industry and fixed nuclear power plants). Emergency exercises provide invaluable opportunities to validate response protocols, ensure equipment effectiveness and facilitate pre-event coordination among different layers of government and the private sector.

Strategy 3.2.2: Respond to or address 100% of all reports received of petroleum, radiological and hazardous material releases. By its very nature, emergency response is unpredictable, and more than one incident can be happening at the same time, which may be at opposite ends of the State, thereby placing competing demands on MDE's emergency response capabilities.

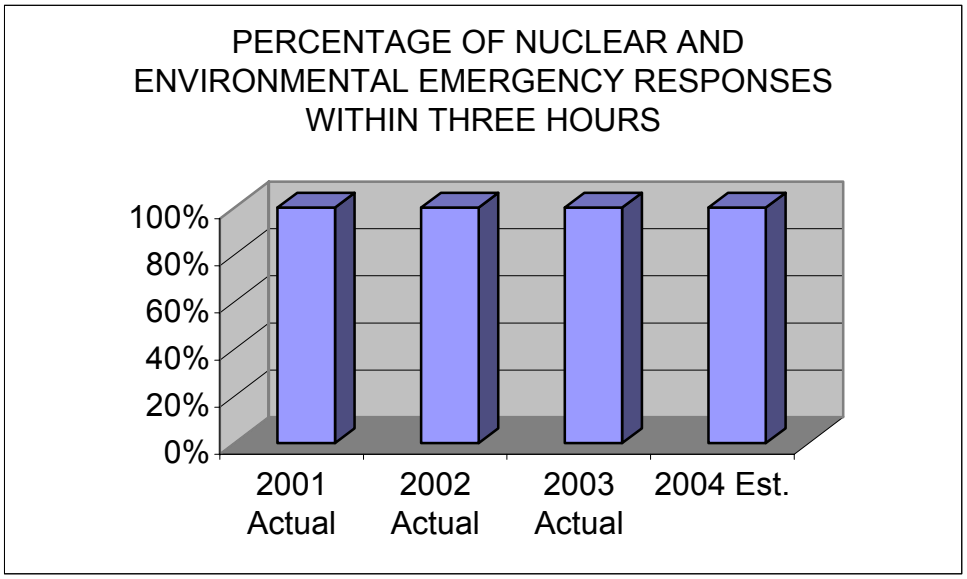
Strategy 3.2.3: MDE will be conducting planning and training to respond to different types of incidents including nuclear, biological, chemical and flood. The Community Right to Know Program gives MDE and communities information about hazards in local facilities.

Performance Measures:

Performance Measures (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Actual	FY 2004 Estimate
Percentage of nuclear and environmental emergency responses activated within three hours of notification	100%	100%	100%	100%
Number of radiological, hazardous material, oil spill and alleged bio-terrorism emergency responses	846	1,039*	1,031	1,300**
Number of nuclear power plant emergency exercises, which are essential to ensuring an adequate response capability	11	8	15***	10
Number of staff hours providing training in emergency response	New measure	New measure	480	480

* The increase in number of emergency responses from 2001 to 2002 is due to more petroleum spills during colder winters.
** The 2004 estimate reflects increased risk of bioterrorism emergencies.
*** Special Ingestion Pathway Drill occurs every six years and requires more exercises. This happened in 2003.

Performance Indicator:



Radiological Health Program

Introduction:

Under both federal and state law, Maryland is charged with ensuring that the public is protected from unnecessary levels of radiation. The Department of the Environment works toward this goal by controlling sources and users of ionizing radiation through licensing and inspection activities.

The majority of uses of radiation are beneficial. Radiation, however, is a carcinogen that may also cause other adverse health effects. The more radiation dose a person receives the greater the chance of developing cancer and the greater the chance for other ill effects. Since there is no definitive threshold for the onset of adverse effects, regulators must ensure that users of radiation limit public exposure to as low as reasonably achievable (ALARA). Exposure to moderate to high levels of radiation can cause serious burns, tissue and organ damage, tumors, loss of hair, and death. Since the long-term effects of exposure to radiation even at low levels is not conclusively known, minimizing exposure is the most prudent approach.

Minimizing exposure is accomplished through several means. X-ray equipment is required to be registered and inspected. Also, any person who uses, possesses or stores radioactive materials or devices containing such materials is required to be licensed by the Department. All licensees receive an inspection. During inspections, the performance of x-ray equipment and devices containing radioactive materials is checked to ensure that they are operating within specified parameters. Operator practices are also checked to ensure that safe operating procedures are being followed to ensure worker safety and to prevent the general public from being exposed to any radiation.

Additionally, radioactive elements provide the fuel source at nuclear power plants, which generate electricity for our use. Though operational and physical plant safeguards have been put in place to minimize such occurrence, the potential exists, in the case of a serious accident, for the escape of radioactive contamination into the atmosphere. Statewide emergency planning is the key to minimizing the impact of such an accident on public health and the environment.

Objective 3.3: In FY 04, improve the initial compliance rate at radiation machine facilities to 60% and the after-45-days reinspection compliance rate to 94%. Also, minimize licensing and inspection backlogs at radioactive materials facilities and meet standard review times on all new license applications.

> **Strategy 3.3.1:** Meet regularly with private inspectors licensed by MDE to develop means to improve communication and increase efficiency.
>
> **Strategy 3.3.2:** Conduct education seminars, speak at exhibitions, and meet with representatives of the dental community to increase dentists' awareness of the potential danger of radiation to their patients and to inform the regulated community of their obligations under the regulations so that compliance rates can improve.
>
> **Strategy 3.3.3:** Provide compliance assistance to individual members of the regulated community in cases where such assistance is warranted. Take timely and appropriate enforcement action when egregious violations of regulatory requirements are encountered.

Strategy 3.3.4: Continue to use tracking tools to assess progress in the inspection and licensing areas. Continue to cross-train staff and shift resources to the extent possible to focus on priority issues.

Performance Measures:

Performance Measure (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Actual	FY 2004 Estimate
Radiation Machines				
Percentage of inspected radiation machines facilities in significant compliance upon inspection	36%	42%	46%	60%
Percentage of reinspected radiation machines facilities in significant compliance after 45 days	90%	87%	92%	94%
Number of inspections of radiation machines facilities	4,176	3,781	4,237	4,000
Number of inspections of medical, industrial and academic x-ray machines facilities performed by state-licensed inspectors	863	756	1,379	1,300
Number of enforcement actions initiated for radiation machines facilities	131	39	8	unable to estimate
Number of compliance assistance actions taken for radiation machines facilities	1,493	2,141	1,288	1,500
Number of presentations, seminars, etc.	2	8	2	2
Radioactive Materials Facilities				
Percentage of inspected radioactive materials facilities in significant compliance	66.5%	74%	86%	80%
Number of inspections of radioactive materials facilities	440	318	309	350
Number of licenses issued for radioactive materials	549	750	740	600
Number of enforcement actions initiated for radioactive materials	22	5	7	N/A
Number of radioactive materials facilities	994	729	895	900
Percentage of new facilities that receive a pre-licensing visit	100%	100%	100%	100%
Percentage of Registrations, Certifications, and Licenses issued within the established standard turn around times	84.5%	96.6%	97.7%	97%
Number of licenses/inspections that are backlogged	52/2	21/8	15/4	8/2

Fish Tissue Sampling

Introduction:

Maryland's commercial and recreational fishing industries both depend on public confidence that the State's fish and shellfish are safe for human consumption. Maryland's Fish Tissue Monitoring and Assessment Program emphasizes a comprehensive sampling approach to certify the safety of recreationally-caught fish for consumption from waters of the State. Chemical contaminants from various sources make their way into water and sediments, which may then accumulate in their tissues The contaminant levels of some fish species may become sufficiently elevated, that, when consumed regularly over long time periods, may increase a consumer's risk of adverse health effects.

MDE is responsible for monitoring contaminant levels in fish tissue, and issues fish consumption advisories for a waterbody when fish there are found to have unacceptable levels of contamination. Currently, fish consumption advisories in Maryland are issued only for PCB and mercury, because only those contaminants have been found at unacceptable levels. PCB is legacy contaminant found in some of the Bay's tributaries' sediments, and also continues to come off the land. Mercury comes from air deposition from coal-fired power plants nationwide and from waste incineration plants locally.

Recently EPA changed the national standard for fish consumption from one based on one meal per month to one based on two meals per month. This reduced the allowable contamination in fish by assuming people eat more fish per month (two meals rather than one). This resulted in numerous advisories issued for freshwater and tidal systems in Maryland. The Department now uses the two-meals-per-month standard as a yardstick to measure trends in contaminant levels statewide. Currently the average sampled concentration for mercury is slightly below the standard, while the average PCB concentration is well above the standard. Note, however, that this elevated average PCB level reflects only limited sampling targeted at problem areas and should decrease as more regions are sampled.

Objective 4.1: By 2012, the fish tissue concentrations of PCBs and mercury in all sampled areas will allow at least two meals per month to be safely eaten.

> **Strategy 4.1.1:** Conduct the environmental sampling and scientific analyses necessary to characterize the toxic organic and inorganic contaminants affecting water quality and harvestable fish, shellfish and crabs in at least one third of the State's waters each year.
>
> **Strategy 4.1.2:** Identify methods to reduce contaminants and implement where possible.

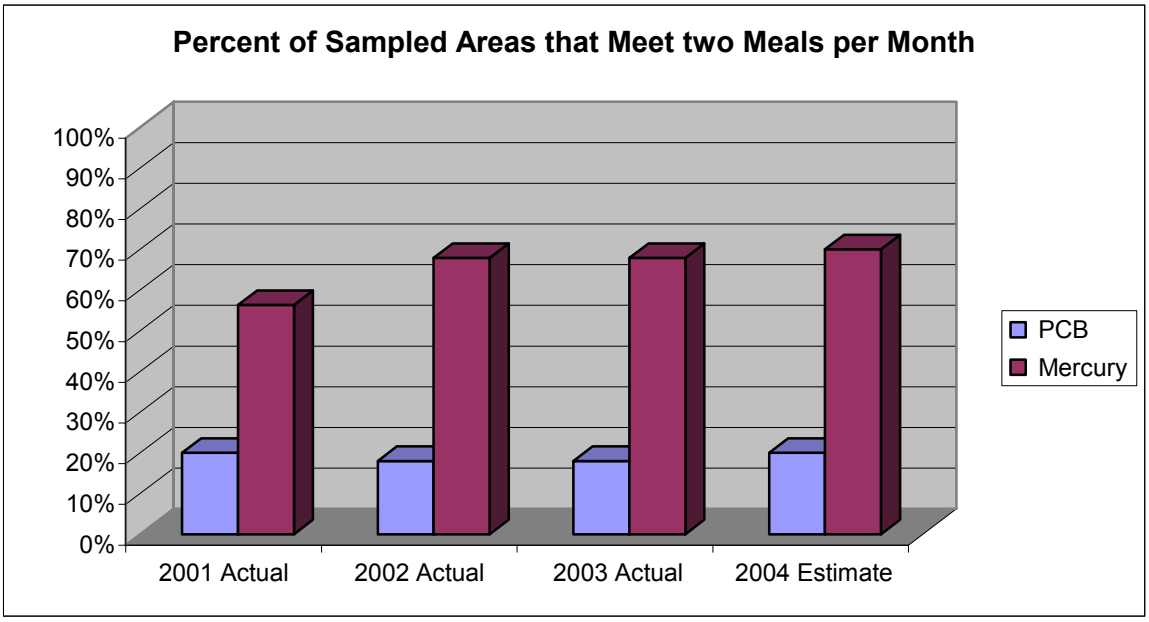
Performance Measures:

Performance Measures (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Actual	FY 2004 Estimate
Percent of sampled areas that meet two-meal-per-month standard for PCB	20%	18%	18%	20%
Percent above allowable average concentration found in sampled common recreational fish for PCB	+203%*	+343%*	+343%*	+250%*
Percent of sampled areas that meet two-meal-per-month standard for mercury	56%	68%	68%	70%
Percent above/ below allowable average concentration found in sampled common recreational fish for mercury	+3%	-3%	-3%	-5%
Toxicity inquires from other administrations, agencies and public	136	236**	88	250**

* This elevated PCB level reflects only limited sampling targeted at problem areas and should decrease as more regions are sampled.

** When new fish consumption advisories come out, as in 2002 and 2004, MDE receives more inquiries.

Performance Indicator:



Shellfish Compliance with FDA Sanitation Standards

Introduction:

Maryland's seafood industry depends on public confidence that the State's shellfish are safe for human consumption. Maryland's shellfish program has been in place for decades and emphasizes both keeping pollutants out of harvesting waters and monitoring the quality of those waters to certify their safety. This workplan relates to three activities: shoreline surveys, water sampling, and shellfish harvesting approvals.

Shoreline surveys are conducted to identify actual and potential pollution sources to the shellfish waters on a five-year cycle (each region surveyed every five years). The percent of required properties, i.e. those with septic systems, surveyed has declined over time due to expanding housing stock in the Chesapeake Bay watershed and declining staff.

With regard to water quality monitoring, Maryland has 700 monitoring stations, and the goal is to collect samples from each station twice per month, which is the minimum required under State statute. However, due to resource constraints and loss of staff over the years, MDE has not been able to take all water samples required by FDA.

Finally, based on monitoring information and other factors, MDE determines whether areas are approved for shellfish harvesting.

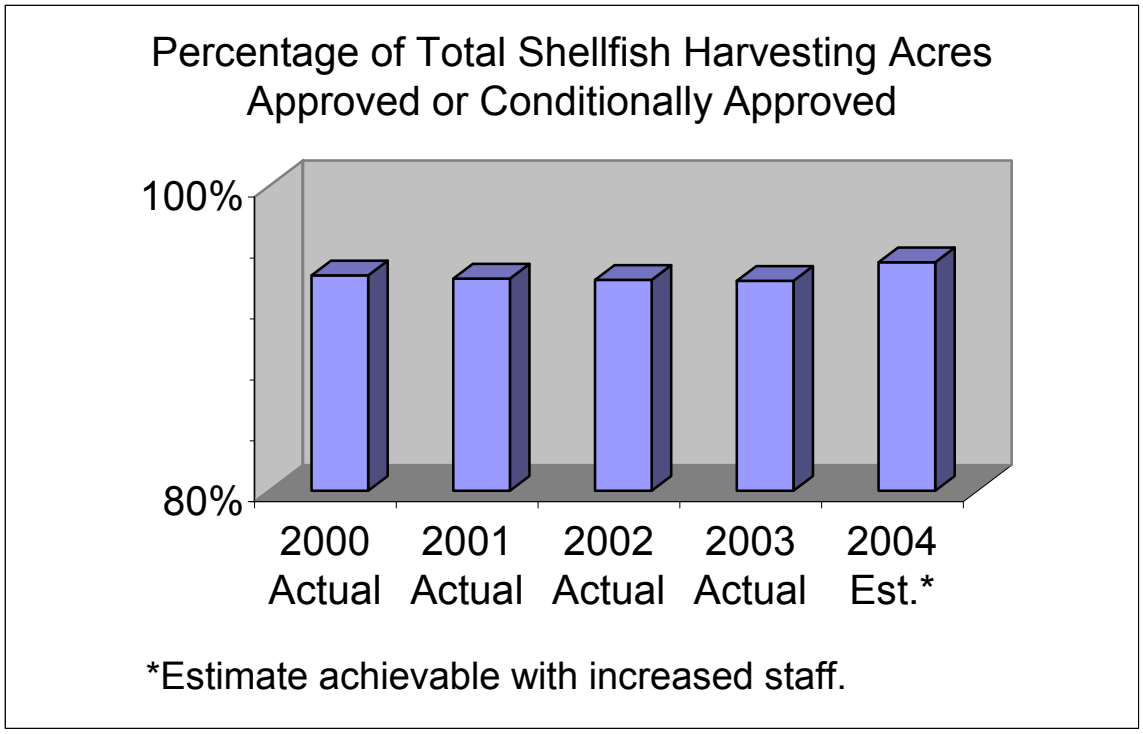
Objective 4.2: In FY 04, ensure that the State's shellfish are safe to eat by achieving and maintaining compliance with FDA Shellfish Sanitation Standards.

> **Strategy 4.2.1:** Perform legally-required water sampling and sanitary survey inspections to discover pollution sources and thereby protect the shellfish beds. Maintain sampling requirements to address the emerging aquaculture industry.
>
> **Strategy 4.2.2:** Secure sufficent resources to meet deficiency in monitoring coverage.

Performance Measures:

Performance Measures (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Actual	FY 2004 Estimate
Percent of required sampling achieved	47.8%	48.5%	46.4%	46.7%
Estimated number of properties that require sanitary surveys (roughly one fifth of total number of properties, due to five-year cycle)	NA	18,285	16,345	16,866
Number of properties included in sanitary surveys	2,454	2,436	2,722	2,698
Percentage of total shellfish harvesting acres approved or conditionally approved	93.93%	93.84%	93.78%	95%

Performance Indicators:



Fish Kills

Introduction: The Environmental Article, in Section 4-405C, requires management and control agencies to investigate the occurrence of damage to aquatic resources, including but not limited to, mortality of fish and other aquatic life. Fish and other aquatic organisms are indicators of potential pollution impairment to the State's waterways. The presence of dead fish may indicate that a toxic substance has entered the waterway. MDE manages and coordinates Maryland's interagency program to investigate fish kills in all waters of the State. MDE works with the Department of Natural Resources Police, who are responsible for posting areas closed to harvesting, and for patrolling these areas to prevent illegal harvesting. The Department also receives, responds to, and interprets all reports of damaged fish. The investigative findings are acted on to enforce the water pollution laws of Maryland, protect public health, aid in resource management, and contribute to public outreach.

Objective 4.3: In FY 04, determine the cause of 90% of all fish kills that are reported in a timely manner.

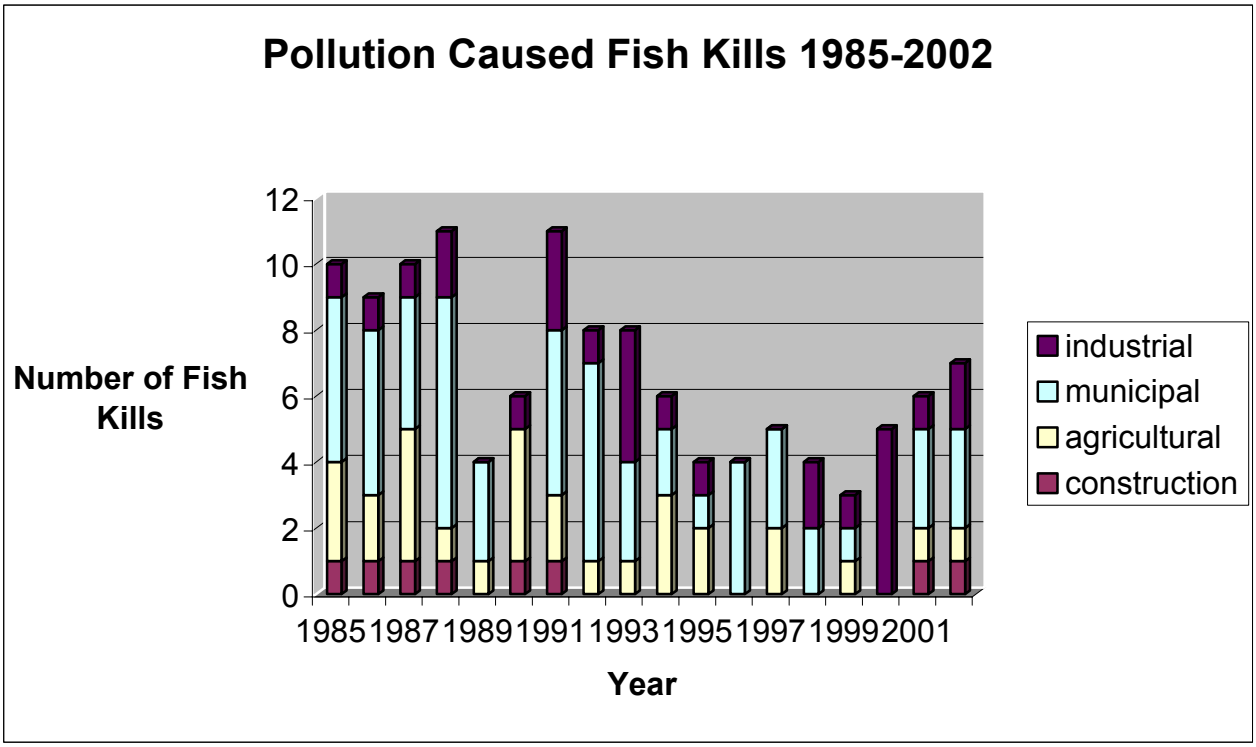
Strategy 4.3.1: Continue to improve performance by streamlining the fish kill investigation process, which includes improving working relationship with sister agencies, qualified volunteers, and technical and laboratory support.

Strategy 4.3.2: Ensure that all pollution-related fishkills are referred to the appropriate agency for enforcement or corrective action. Referrals may be made to county officials, DNR's Natural Resources Police, MDE's Water Management's Industrial Compliance Group, MDE's Emergency Response/Hazmat group, or MDA's Pesticide Regulation Section. Most kills are due to sewage spills, swimming pool discharges, or manure spills. MDE's Emergency Response group handles oil spills from overturned trucks or overfilled tanks.

Performance Measures:

Performance Measures (data are annual, not cumulative, unless otherwise noted)	**FY 2001 Actual**	**FY 2002 Actual**	**FY 2003 Actual**	**FY 2004 Estimate**
Number of fish kill investigations performed	90	84	96	80
Percentage of fish kill reports investigated for which a causal factor can be identified	92%	92%	87%	90%
Number of investigated fish kills where the cause is pollution	5	6	7	5
Percent of investigated fish kills where the cause is pollution	6%	7%	7%	6%

Performance Indicator:



Discharge Permits

Objective 5.1: Protect water quality by issuing discharge permits and inspecting permitted facilities, and implement watershed-based permitting to provide coordinated watershed protection. In FY 04, achieve 99% significant compliance with discharge permit effluent limitations for all inspected surface water state- and NPDES-permitted sites/facilities.

Strategy 5.1.1: Inspect all major permitted industrial and wastewater treatment plants annually and targeted minors identified in the Section 106 Water Pollution Control Grant every year.

Strategy 5.1.2: Continue to provide on-site compliance assistance to ground water discharge permittees to help resolve minor compliance issues.

Strategy 5.1.3: Continue to provide on-site compliance assistance to surface water discharge permittees to help resolve minor compliance issues.

Strategy 5.1.4: Take appropriate and measured enforcement action against those facilities that fail to comply with permit requirements.

Performance Measures:

Performance Measures (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate
Number of surface water sites/facilities (state and NPDES) permits in effect at the end of the fiscal year	2,022	2,298	2,800	2,900
Number of surface water (state and NPDES) inspections conducted	8,151	9,546	9,900	8,800
Number of surface water sites inspected	1,249	1,416	1,400	1,400
Percentage of inspected surface water sites/facilities (state and NPDES) in significant compliance	98%	98%	99.8%	Unable to Estimate
Total number of surface water compliance assistance actions rendered	128	168	170	Unable to Estimate

Sewage Overflows

Objective 5.2: Reduce the quantity in gallons of sewage overflows [total for Combined Sewer System Overflows (CSO) and Separate Sewer System Overflows (SSO)] equivalent to a 50% reduction of 2001 amounts by the year 2010 through implementation of EPA's minimum control strategies, long term control plans, and collection system improvements in capacity, inflow and infiltration reduction, operation and maintenance.

Strategy 5.2.1: MDE will adopt regulations and ensure that all jurisdictions are reporting all sewage overflows to the Department, notifying the public about significant overflows, and are taking appropriate steps to address the cause(s) of the overflows.

Strategy 5.2.2: MDE will inspect and take enforcement actions against those CSO jurisdictions that have not developed long-term control plans with schedules for completion and require that enforceable schedules are incorporated in consent decrees or judicial orders.

Strategy 5.2.3: MDE will take enforcement actions to require that jurisdictions experiencing significant or repeated SSOs take appropriate steps to eliminate overflows, and will fulfill the commitment in the EPA 106 grant for NPDES enforcement regarding the initiation of formal enforcement actions against 20% of jurisdictions in Maryland with CSOs and significant SSO problems annually.

Performance Measures:

Performance Measure (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate
Number of collection systems with significant SSOs	12	15	25	10
Number of collection systems with CSOs	9	8	8	8
Total number of overflows (SSOs +CSOs)	930	1,462	1,700	1,000
Total number of gallons (SSOs + CSOs)	50,821,102	82,213,291	100,000,000	80,000,000
Number of CSOs meeting minimum controls	6	8	8	8
Number of CSOs with LTCP with completion dates	2	3	4	8
Number of CSO formal enforcement actions completed this year	0	4	3	0
Number of SSO formal enforcement actions completed this year	2	1	2	3
Net change in the number of gallons of sewage overflows (+/-) compared to 2001 level	N/A	+31,392,189	+49,178,898	+29,178,898
Percentage change in gallons of sewage overflow from 2001 level	N/A	62% increase	97% increase	57% increase

Financial Assistance for Capital Programs

Introduction:

There is a critical need for capital grants and loans for water and wastewater infrastructure in Maryland: current estimates are $4.3 billion in wastewater and $1.7 billion in water supply systems. The Nutrient Reduction Cost-Share Program, first funded by the Maryland General Assembly during the 1984 legislative session, is a State/Local cost-share grant program that provides financial assistance to local governments to implement nutrient-removal technology at the largest publicly-owned sewage treatment plants in Maryland. Specifically, the Program is geared towards 66 major treatment facilities that are designed to treat 500,000 gallons per day or greater.

The rationale for targeting these major facilities is that their combined flow comprises more than 95% of the total sewage flow generated in Maryland; also, nutrient-removal technology is more cost-effective at larger plants. The goal of the Program is to fulfill Maryland's commitments under the multi-state Chesapeake Bay Clean Up Agreement for major reductions of nutrients – nitrogen and phosphorus – being discharged from sewage treatment plants into the Chesapeake Bay. Reducing nutrients discharged from sewage treatment plants into the Chesapeake Bay is essential to meeting the overall goals of the federal Clean Water Act and for improving and protecting water quality, aquatic life and habitat, and the quality of life and economic activities associated with a healthy Chesapeake Bay.

To meet nutrient reduction goals set forth in the Chesapeake Bay Agreement, Maryland's 1994 Chesapeake Bay Tributary Strategies outlined specific nutrient reductions required from all sources. Full implementation of the Tributary Strategies requires the retrofit of the 66 major sewage treatment plants in Maryland by installing the first level of nutrient removal, commonly referred to as Biological Nutrient Removal (BNR). The 2000 Chesapeake Bay Agreement called for Maryland to reaffirm the 1994 Tributary Strategies as a minimum commitment, and further commits all bay states to remove all nutrient impairments to the Bay by 2010. To meet these new commitments, additional reductions of nutrient pollutants from all sources including sewage treatment plants are necessary.

Nutrient removal goals for major sewage treatment plants have been established at 3 mg/l for nitrogen and 0.3mg/l for phosphorus. To meet these nutrient performance goals necessary for the Chesapeake Bay cleanup, major sewage treatments will have to provide a highly advanced level of nutrient removal - Enhanced Nutrient Removal (ENR). BNR/ENR is one of Governor Ehrlich's top initiatives. 66 WWTPs have signed cost-share agreements and 41 of the 66 are operating in BNR/ENR (5 are in construction and 20 are in design). BNR efforts have already reduced nitrogen by 16 million pounds per year and ENR will achieve another 7.5 million pounds per year reduction to meet the Chesapeake Bay goals. Federal funding is needed to complete BNR/ENR at Back River, Patapsco and Blue Plains.

Objective 5.3: By 2010, correct the point-source nutrient-related problems in the Chesapeake Bay and its tidal tributaries in order to achieve the Chesapeake 2000 Agreement goal.

> **Strategy 5.3.1:** Secure $90M in capital funding for Water Quality Improvement Projects for FY 2004. Funds appropriated by the Legislature for FY2004 will be utilized in a timely manner by encumbering not less than 90% of funds by the end of FY2004.

Strategy 5.3.2: Capital funding for eligible "growth-related" projects will be targeted towards Priority Funding Areas consistent with the law.

Strategy 5.3.3: Develop options for implementing Enhanced Nutrient Removal technology in existing wastewater treatment plants that have or will have BNR technology in place consistent with Bay Agreement commitments.

Strategy 5.3.4: Take necessary steps in conjunction with the Maryland Department of Planning to identify and obtain increased federal funding to help support BNR and ENR upgrades at wastewater treatment plants.

Performance Measures:

Performance Measures (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate
Total amount of state dollars encumbered for Biological Nutrient Removal (BNR)	$14.0M	$16.3M	$17.8 M	$11.5M
Total amount of state dollars financed for capital improvement projects by the Water Quality Revolving Loan Program	$102.5M	$44M	$40 M	$70M
Total amount of state dollars encumbered for other water quality capital improvement projects (SCERP, Supp Assist, SWM)	$7.1M	$4.89M	$5.71M	$7.25M
Percent reduction in point source nitrogen loading since 1985	49%	50%	53%	56%
Total million pounds of point source nitrogen reduced since 1985	15.9	15.9	17.3	18.3

Total Maximum Daily Loads

Introduction: MDE develops Total Maximum Daily Loads (TMDLs) in accordance with Section 303(d) of the federal Clean Water Act. A TMDL is an estimate of the maximum amount of an impairing substance or stressor that a waterbody can assimilate without violating water quality standards. TMDLs are required to be developed for each waterbody and associated impairment(s) listed on the State's "303(d) list" of impaired waters. The estimated loads are allocated to point sources (e.g., industries), and nonpoint sources (e.g., stormwater runoff) within the watershed, with a margin of safety provided. Each year, MDE strives to meet ambitious submittal goals based upon a Memorandum of Understanding between MDE and the U.S. Environmental Protection Agency, which leaves MDE open to potential litigation should the goals not be met.

Objective 5.4: Complete 85% of TMDLs in accordance with EPA submission schedule (i.e. within 8-13 years after waterbody is listed as impaired), and incorporate approved TMDLs into the permits in the targeted impaired watershed.

Strategy 5.4.1: Conduct intensive field operations to verify the impairment and to support the development of a computer model that simulates the waterbody.

Strategy 5.4.2: Use the model to conduct the TMDL analysis, which is made available for public comment. All comments received are addressed in a formal Comment Response Document, the TMDL is revised accordingly, and the TMDL with accompanying comment response document is submitted to EPA for review.

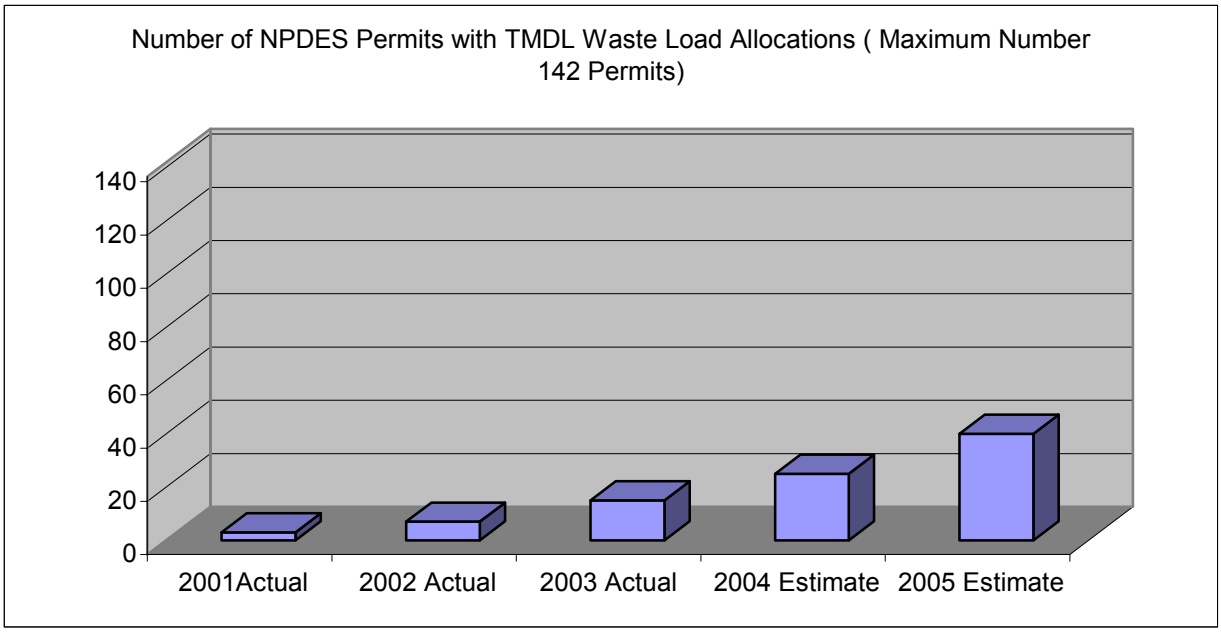
Strategy 5.4.3. Once EPA approves the TMDLs they are incorporated as either limits or goals into new and renewed NPDES discharge permits. Permits are renewed every five years and there will be a approximately 142 permits affected.

Performance Measures:

Performance Measures (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Actual	FY 2004 Estimate
Percent of TMDLs submitted in accordance with agreed upon TMDL submittal schedule (calendar year total)	100%	105%	96%	85%*
Percent of total TMDLs required that are completed this fiscal year (recorded as cumulative percentage of 10-year required total)	8%	14%	21%	38%
Number of new or renewed NPDES permits issued that incorporate approved TMDL wasteload allocations	3	4	8	10
Number of water bodies impaired (based on 303(d) List (8-digit) (total 138)	127	133	133	133

* Declining percentage reflects this program's severe resource constraints.

Performance Indicators:



Attainment of Federal Ozone Standards

Introduction:

Under federal and state law and regulations, the Department is charged with ensuring that Maryland's air is safe to breathe. Air pollution contributes to illnesses, including cancer, and detrimentally affects respiratory and reproductive systems. Air pollution can also reduce visibility; damage crops, forests and buildings; and acidify lakes and streams.

The federal government has established public-health-based ambient air quality standards for six pollutants: ozone (ground level), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), lead, and particulate matter. Maryland's air quality generally complies with all standards except ozone and fine particulate matter: the air quality in parts of Maryland, generally the Baltimore and Washington metropolitan areas and Cecil County, fails to meet the ozone standards at times between May and September of each year. More than 89% of the population of Maryland resides in these areas. Monitoring data show that portions of these same areas have air quality that does not meet the new federal standard for fine particulate matter. Development and implementation of a plan to bring the State into compliance with this new standard, however, falls outside the timeframe of this MFR workplan.

Objective 6.1: Work to reduce transported ozone through legal action and through requests to EPA, either alone or in concert with similarly affected states, for stricter controls on sources upwind of Maryland.

> **Strategy 6.1.1:** Work with the University of MD and regional air pollution organizations to develop the necessary scientific information to demonstrate the degree to which transported pollution needs to be addressed so that Maryland's air quality needs are met.
>
> **Strategy 6.1.2:** Work with regional and national organizations, such as the Ozone Transport Commission, STAPPA/ALAPCO and NESCAUM, to evaluate the effect that national legislation may have on Maryland's air quality.

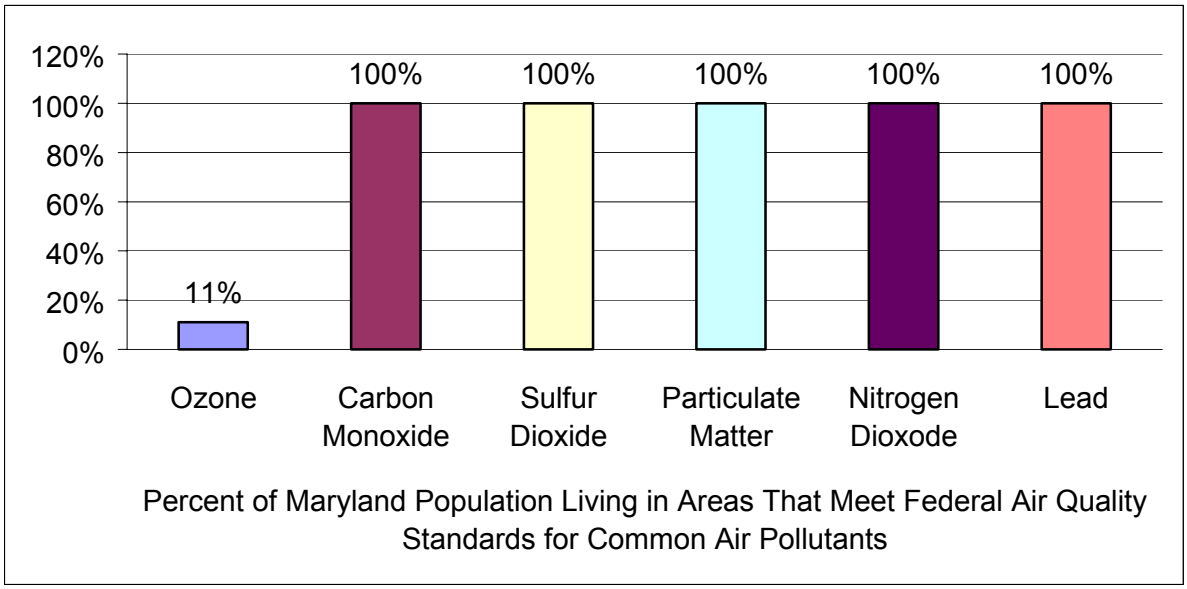
Objective 6.2: Achieve attainment with the one-hour ozone standard by 2005 in the Baltimore and Washington metropolitan areas and Cecil County.

> **Strategy 6.2.1:** Reduce emissions from mobile, stationary, and area sources by developing and administering emission reduction programs within each of these source sectors to levels adequate to allow Maryland to achieve attainment with the 1-hour ozone standard by 2005.
>
> **Strategy 6.1.3:** Issue permits to regulate the construction and operation of ozone precursor air emission stationary sources, conduct inspections and audits and review compliance-related documents to ensure that permit and regulatory requirements are being met within all source categories.

Performance Measures:

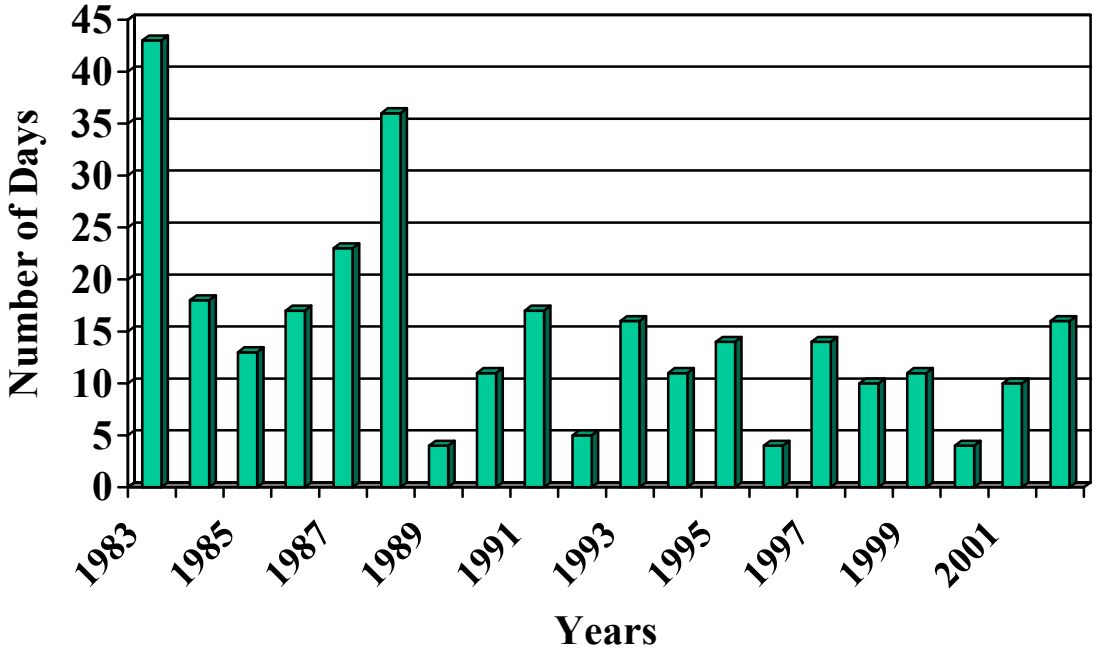
Performance Measures (data are annual, not cumulative, unless otherwise noted)	**FY 2001 Actual**	**FY 2002 Actual**	**FY 2003 Actual**	**FY 2004 Estimate**
Number of exceedances of the 1-hour ozone standard	4	16	2	10
Percentage of MD population living in areas not meeting air quality standards	87%	89%	89%	89%
Tons per year emissions reported for criteria pollutants at high-impact sources	548,980	525,705	525,494	525,500
Number of Air Pollution Permits Issued	691	774	950	750
Number of air pollution sites inspected/ Total # sites	988/11,198	1,252/11,007	1,278/11,274	1,000/11,000
Number of VEIP inspection station/repair facility audits	3,180/1,416	3,340/1,294	3,521/1,075	3,000/1,500

Performance Indicators:

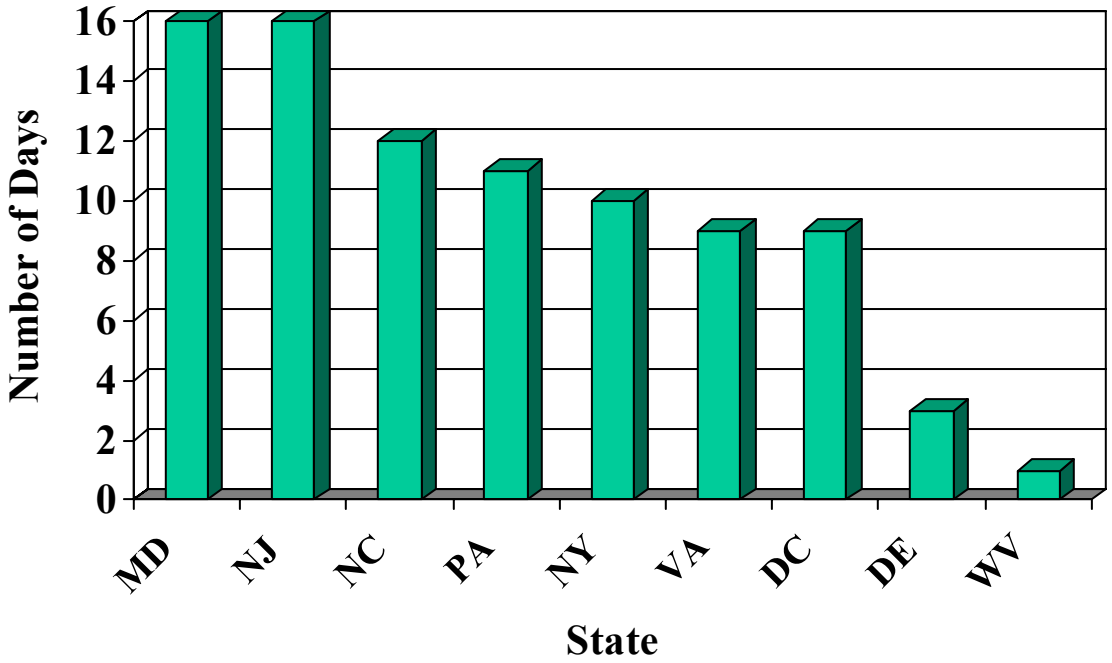


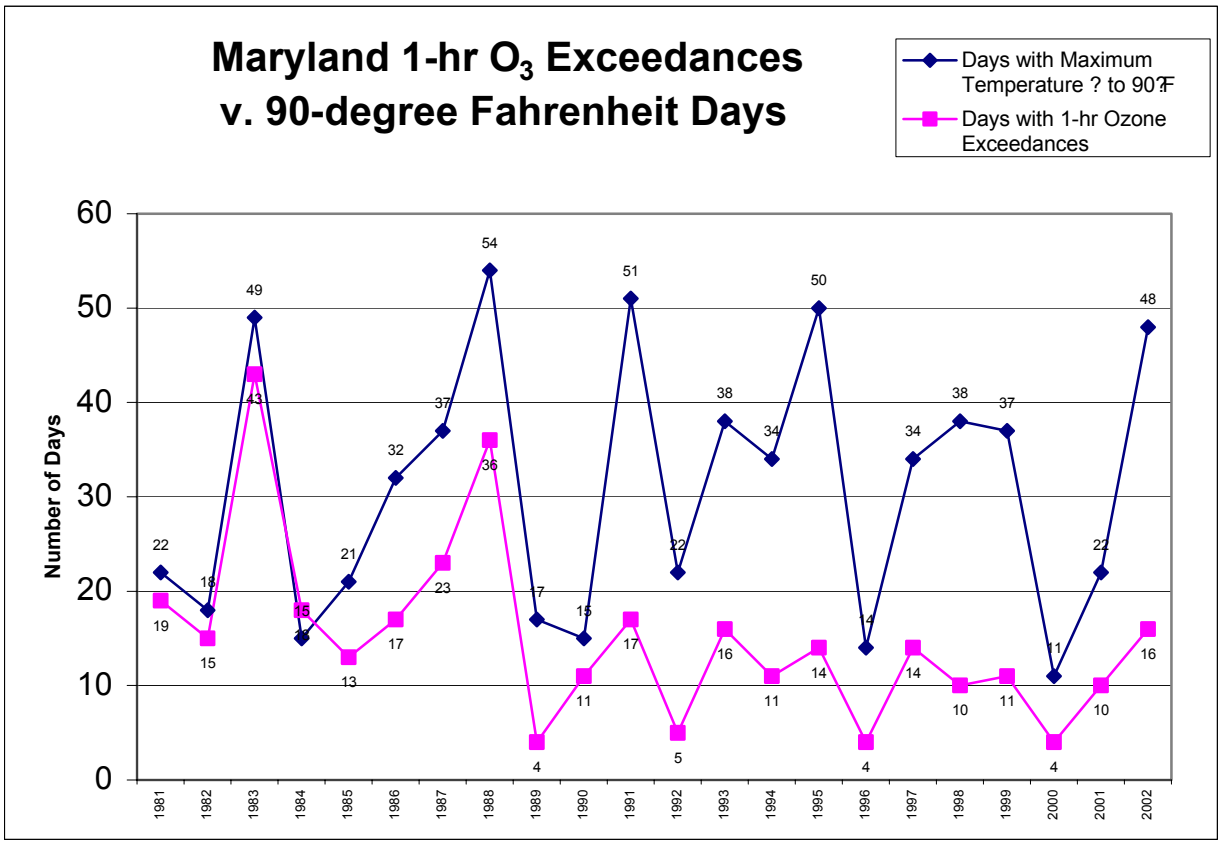
Percent of Maryland Population Living in Areas That Meet Federal Air Quality Standards for Common Air Pollutants

Number of Days per Year the One-Hour Ozone Standard Was Exceeded in Maryland



2002 Ozone Exceedance Days by State




Maryland 1-hr O_3 Exceedances
v. 90-degree Fahrenheit Days
Days with Maximum Temperature ? to 90?F
Days with 1-hr Ozone Exceedances
Number of Days
0
10
20
30
40
50
60
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
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2002
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38
11
34
14
50
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37
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48
16

Electronic Government Services

Introduction: MDE is committed to assuring public participation and stakeholder involvement in all the Department's activities. Numerous programs encourage public participation and public responsibility in order to achieve Maryland's public health and environmental protection goals. The availability of electronic government technology enhances the opportunities for improved and expanded access to public information and services.

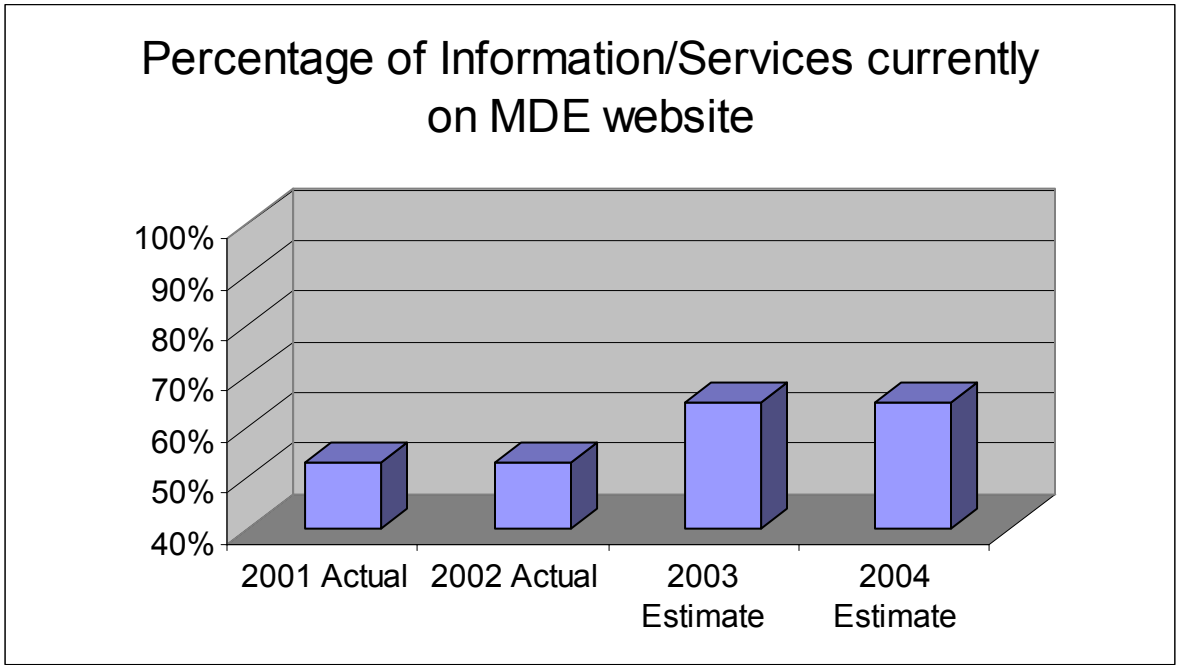
Objective 7.1: Provide public accessibility via the Internet to MDE's information and services at a level that is consistent with the State's eGovernment Initiative goals of 65% in FY 04 (by December 2003) and 80% in FY 05 (by December 2004).

> **Strategy 7.1.1:** Develop and implement additional capability for delivering information and services, such as requested permits, registrations and applications to support lab and other data submittals via the Internet to meet the goal of 65% by December 2003.
>
> **Strategy 7.1.2:** Acquire and begin to implement an integrated, regulated-entity-based Enterprise Environmental Management System (EEMS), consolidating many existing separate databases to support the Agency's mission, strategic plan, and customer-service commitments.

Performance Measures:

Performance Measures (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate
Percentage of public information/services currently on MDE website	49%	52.9%	65%	65%
Percentage of programs implemented into EEMS	New measure	New measure	New measure	10%

Performance Indicators:



Customer Service and Stakeholder Involvement

Objective 7.2: Improve customer service, promote pollution prevention, and enhance stakeholder involvement. Specific FY 04 targets appear in the strategies below.

Strategy 7.2.1: In FY 04, all programs will meet the Department's goal of processing 90% of all permit applications within applicable standard permit application review times, which are established by the Department and reviewed annually with stakeholder review and input. Also, MDE will not be required to refund any permit application fees for inappropriately-delayed permits pursuant to §1-606 of the Environment Article (the Predictable Permitting Services Program, or PPSP).

Strategy 7.2.2: Increase pounds of pollution prevented and costs savings achieved as voluntarily reported by both members of *Businesses for the Bay* and facilities receiving pollution prevention technical assistance through MDE's P2 program by 10% over FY 03.

Strategy 7.2.3: In FY 04, increase the number of companies receiving Environmental Management System implementation assistance and on-site pollution prevention technical assistance by 10% over FY 03.

Strategy 7.2.4: MDE is legally required to fulfill all PIA requests within 30 days, but resource constraints don't allow the agency to meet this mandate. MDE's 2004 target is 75%.

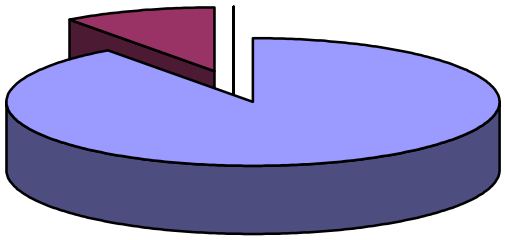
Strategy 7.2.5: To improve state coordination among county health officials, MDE, and DHMH on environmental health issues through the MDE-run Environmental Health Liaison Committee (EHLC).

Performance Measures:

Performance Measures (data are annual, not cumulative, unless otherwise noted)	FY 2001 Actual	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate
Percent of applications processed within standard review times	91%	92%	90%	90%
Number of refunds made under PPSP	0	0	0	0
Pounds of pollution prevented and costs savings achieved as voluntarily reported by both members of *Businesses for the Bay* and facilities receiving pollution prevention technical assistance through MDE's P2 program	13,020,270/ $9,800,000	14,322,297/ $10,780,000	15,754,527/ $11,858,000	Unable to estimate.
Number of facilities receiving Environmental Management System implementation assistance and on-site pollution prevention technical assistance	5	12	12	13
Percent of timely PIA responses	70%	78%	66%	75%
Issues between MDE and counties resolved via EHLC (generally all issues that arise are resolved)	8	10	12	10

Performance Indicator:

Large portion of pie indicates percentage of permits issued within standard turnaround times.



Processing approximately 20,000 permit applications annually, MDE meets its goal of issuing or denying 90% of requested permits within the applicable permit application turnaround times.

Park Heights Initiative

Introduction:

An "Environmental Results Program (ERP)" project is based on a problem-solving approach to environmental management. The environmental problem solving approach to regulation advocates collaborative relationships among regulators, regulated community and host communities. This ERP initiative is designed to improve the environmental performance of auto repair and auto body shops in the Park Heights community. This project was born out of community concerns about potential violations at these facilities that may be creating adverse environmental impacts affecting the community's quality of life.

The project has three phases. Phase 1, identification of all relevant facilities in the area and random initial baseline EPA inspections, was completed in FY 03. Phase 2 is underway: MDE has designed and is currently providing outreach and training to the facilities. The outreach materials include a plain-English workbook explaining the requirements to reach compliance, as well as a self-disclosure report form. The community association has distributed these workbooks and self-disclosure forms to all the facilities they originally identified. Phase 3, final random inspections, will be conducted in FY 04, followed by a report that will include survey data about the changes observed by the community on the part of the facilities.

Objective 7.3: Conduct an "Environmental Results Program (ERP)" project that will bring about a 10% improvement in compliance and in community perceptions of relevant quality-of-life factors.

Strategy 7.3.1: MDE has designed a checklist as well as the methodologies for performance measurement. The checklist has been used to establish a baseline and will be used to measure compliance rate and change in behavior from before and after the compliance assistance intervention.

Strategy 7.3.2: Conduct a compliance assistance intervention. MDE has designed and is providing outreach and training to the facilities after the initial baseline inspections. The outreach materials include a plain English workbook explaining the requirements to reach compliance and a self-disclosure report form. The community association will continue to distribute these workbooks and self-disclosure forms to all the facilities they originally identified.

Strategy 7.3.3: EPA will inspect a random sample of the identified facilities both before and after the compliance assistance intervention.

Strategy 7.3.4: In conjunction with the Park Heights Community Health Association (PHCHA) citizens group and the Schaefer Center for Public Policy at the University of Baltimore, MDE developed a survey instrument to measure the change in perception as regards to the community quality of life. This instrument will be delivered and collected by PHCHA both before and after the compliance assistance intervention to measure the benefit to the community and the change from the baseline.

Strategy 7.3.5: A third-party consultant will provide scientific analysis and use statistical methods to measure any change in behavior and any change in the compliance rate of the regulated facilities; measure the effectiveness of the MDE intervention; and measure the benefit to the community during the period of the project.

Performance Measures:

Performance Measures (data are annual, not cumulative)	FY 2001 Actual	FY 2002 Actual	FY 2003 Actual	FY 2004 Estimate
Expenditures	New measure*	New measure*	$51,000	$235,000
Number of auto repair and body shops participating	New measure*	New measure*	12	40
Number of inspections performed	New measure*	New measure*	43	45
Number of workbooks distributed by community representatives	New measure*	New measure*	60	90
Number of shops represented at compliance assistance training events	New measure*	New measure*	8	20
Improvement in compliance rate	New measure*	New measure*	**	+10%
Improvement in behavior	New measure*	New measure*	**	+10%
Improved benefit to community	New measure*	New measure*	**	+10%

* Project began in FY03.
** FY03 was baseline year.

Note: The project will be completed and the final report written before the end of FY04. The report will form the basis of the new strategies to be used to maintain the improvements accomplished by the project. The maintenance objectives will be tracked in FY05 under MDE's MFR Goal One.